

Unclassified

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This data report consists of a six part statistical summary of surface weather observations. The six parts are: Part A - Weather Conditions/ Atmospheric Phenomena, Part B - Precipitation/Snowfall/Snow Depth, Part C - Surface Winds, Part D - Ceiling versus Visibility/ Sky Cover, Part E - Psychrometric Summaries, Part F - Station Pressure/Sea Level Pressure		

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DOC	Buff Section	<input type="checkbox"/>
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UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

STATION NO ON SUMMARY: 14793	STATION NAME Willow Grove, Pennsylvania	LATITUDE 40°11'N	LONGITUDE 75°08'W	STATION ELEV (FT) 369	CALL SIGN KNXX	WMO NUMBER
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## STATION LOCATION AND INSTRUMENTATION HISTORY

NUMBER OF BARQ LOCATION	GEOGRAPHICAL LOCATION & NAME	TYPE OF STATION	AT THIS LOCATION		LATITUDE	LONGITUDE	ELEVATION ABOVE MSL		OBS PER DAY
			FROM	TO			FEET	TYPE BAROMETER	
1.	Weather service office, second deck of ops bldg	USN	1949	1956	40°11'N	75°08'W	380	Tonnelot	Var
2.	Weather service office, ground floor of hangar/ops bldg	"	1956		"	"	346	"	"
1a.	Weather office in GMQ-14 cabinet	"	1967		"	"	348	Aneroid	"

NUMBER OF LOCATION	DATE OF CHANGE	SURFACE WIND EQUIPMENT INFORMATION				REMARKS, ADDITIONAL EQUIPMENT, OR REASON FOR CHANGE
		LOCATION	TYPE OF TRANSMITTER	TYPE OF RECORDER	HT ABOVE GROUND	
1.	Installed 1958	Above control tower roof	*Selsyn	RD-108B	350' MSL	1. Barograph (ML-3)
1a.	1958	1800' west southwest from hangar/operations building	UMQ-5C			2. Semi-auto met sta (AN/GMQ-14)
2a.	1965	4600' southeast of hangar 80.	"	"	15'	3. Ceiling light (ML-121)
3.	1977	500' southwest of centerline 15-33 Top of control tower, SW corner of hangar 80	"	"	80'	4. Cloud height set (AN/GMQ-13) 5. Transmissometer (AN/GMQ-10) 6. Radar (R015/GMH-6) 7. GOES (R0 379/GMH) 8. Pilot to forecaster radio (RHMS 9)
		*Decommissioned 1958.				

## SUMMARY OF METEOROLOGICAL OBSERVATIONS, SURFACE

DIRNAVOCEANMET ltr 3146 Ser 1032 dated 26 August 1977 (NOTAL) established the following policy for SMOS production and updating:

1. Ten years of data will be used as the standard period of record (POR).
  2. All available data will be used for extreme values.
  3. Summarize (update) every five years.
    - a. Summarize the five year period (1973-1977) for all sections of the SMOS except extremes. The 5 year summary will be an intermediate SMOS to show secular trends. All available data through 1977 will be included for extreme values.
    - b. The update in 1983 will include the POR 1973 through 1982, with all available data through 1982 for extreme values.
    - c. The update in 1988 will be an intermediate SMOS (POR 1983-1987). All available data through 1987 will be included for extreme values.
    - d. In 1993 the POR will be 1983 through 1992. All available data through 1992 will be used for extreme values.
- Each standard POR (10 years) summary should be retained by individual stations along with the SMOS prepared in 1973. The retention of these summaries will provide the most comprehensive climatological file for your station.

DESCRIPTION: Preceding each section is a brief description of the data comprising each part of the summary and the manner of presentation. Tabulations are prepared from 3-hourly and daily observations recorded by stations operated by the U.S. Navy and U.S. Marine Corps. 3-hourly observations are defined as these record or record-special observations recorded at scheduled 3-hourly intervals. Daily observations are selected from all data recorded on reporting forms and combined into Summary of the Day observations (prepared from record-special, local, summary of the day, remarks, etc.).

COMMENT: All observations summarized in this tabulation have been computer edited for consistency and reasonableness prior to, or during, the processing stage. Efforts to improve the quality of the data after summarization are expensive, i.e., the improvement might consist of the elimination of one suspect or erroneous value. The cost of preparing "perfect" copy can be prohibitive due to the handwork involved. Suspect cases will occur infrequently, but users should not disregard extreme values completely as some could be valid. Questionable values will most likely be single occurrences shown by a percentage frequency of ".0". (This value indicates a percent less than ".05," which, in most cases, reflects a single observation.) Since most stations summarized now have in excess of 10,000 3-hourly observations, the occurrence of an occasional spurious value should not in itself be considered significant. Every effort is made by this office to maintain a high degree of accuracy and reliability in these tables, and the Naval Weather Service Detachment (NWSA), Asheville, N. C. welcomes your comment and criticisms.

## PART A

## WEATHER CONDITIONS

This summary is a percentage frequency occurrence of various atmospheric phenomena and obstructions to vision, derived from 3-hourly observations, and is presented in three tables as follows:

1. By month and annual, all hours and years combined.
2. By month and annual, all hours and years combined, by wind direction.
3. By month, all years combined, by standard 3-hour groups.

Occurrences of the various phenomena included in each category on the forms are listed below:

Thunderstorms - All reported occurrences of thunderstorm, tornado, and waterspout.

Rain and/or drizzle - All liquid precipitation, falling to the ground, not freezing.

Freezing rain and/or freezing drizzle (glaze) - Precipitation falling in liquid form, but freezing on contact with an unheated surface.

Snow and/or sleet - Included are snow, sleet, snow pellets (soft hail), snow grains, and ice crystals.

Hail Occurrences of hail and small hail are included.

Percentage of observations with precipitation - Included in this category are the observations when one or more of the above phenomena occurred. Since more than one type of precipitation may be reported in the same observation, the sums of the individual categories may exceed the total columns.

Fog - Included are fog, ice fog, and ground fog.

Smoke and/or haze - Occurrences of smoke, haze, or combinations of smoke and haze are included.

Blowing snow - Occurrences of blowing snow (also drifting snow when reported from non-WBAN sources.)

Dust and/or sand - Included are blowing dust, blowing sand, and dust.

Blowing spray - This item if reported, is not shown in a separate category on this form but is included in the computation Percentage of Observations with Obstructions to Vision.

Percentage of observations with obstructions to vision - Included in this category are the observations when one or more of the above obstructions to vision occurred. Since more than one type of obstruction may be reported in the same observation, the sums of the individual categories may exceed the percentage total columns. Also, although precipitation may reduce visibility, it is not considered an obstruction to vision for purposes of this summary; therefore, the percentage total of obstructions to vision need not reflect the total observations with reduced visibility.

NOTE: The total number of observations may vary among tables within the same month and period. Percentages may not always equal 100.0 due to rounding practices.

## PART A

## ATMOSPHERIC PHENOMENA

This summary is a presentation of the percentage of days with occurrences of various atmospheric phenomena. These data are obtained from all recorded information on the reporting forms and combined into a daily observation.

The descriptions of the phenomena in the Weather Conditions Summary above also apply for the categories summarized in these tabulations. However, it should be noted that in this summary the columns headed "% OF OBS WITH PRECIP" and "% OF OBS WITH OBST TO VISION" show the percentage of days rather than percentage of observations. Since more than one type of precipitation or more than one type of obstruction may occur in the same daily observation, the sum of the values in the individual columns may not equal the total columns.

This presentation is by month with annual totals, and is prepared with all years combined.

NOTE: A day with rain and/or drizzle was not separately reported in WBAN data prior to January 1949. Therefore percentages in this column are restricted to the period January 1949 and later.

A day with dust and/or sand was punched and included in this summary only when visibility was less than  $5/8$  mile.

Percentage Frequency of Wind Direction vs. Weather Conditions - This tabulation is derived from 3-hourly observations and is presented by month and annual, all hours and years combined. The main body of the Summary consists of weather conditions (horizontally) and wind directions (vertically) to 16 compass points (plus calm). Column totals show the number of observations. "% Total" indicates percentage frequency of occurrences.

## WEATHER CONDITIONS

5701 WEATHER CONDITIONS JAN 1978

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14793 STATION WILLOW GROVE, PENNSYLVANIA 73-77 YEARS JAN MONTH

PERCENTAGE FREQUENCY OF OCCURRENCE OF WEATHER  
CONDITIONS FROM HOURLY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBST TO VISION	TOTAL NO. OF OBS.
JAN	01		9.0	1.3	4.5		14.2	13.5	3.9			17.4	155
	04		9.7	1.9	3.2		14.8	16.8	6.5			23.2	155
	07		7.1	1.3	4.5		12.3	23.9	9.0			29.0	155
	10		4.5	1.3	5.8		11.6	21.3	22.6			40.6	155
	13		6.5	.6	5.2		11.6	15.5	21.3	.6		34.2	155
	16		5.8	1.3	3.9		11.0	11.0	21.3	.6		31.0	155
	19		8.4	1.3	5.2		14.8	11.6	10.3	.6		21.3	155
	22		6.5	1.3	4.5		12.3	13.5	7.7	.6		21.3	155
TOTALS			7.2	1.3	4.6		12.8	15.9	12.8	.3		27.3	1240

## WEATHER CONDITIONS

FEB  
MONTH73-77  
YEARSWILLOW GROVE, PENNSYLVANIA  
STATION NAME14793  
STATIONPERCENTAGE FREQUENCY OF OCCURRENCE OF WEATHER  
CONDITIONS FROM HOURLY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBST TO VISION	TOTAL NO. OF OBS.
FEB	01		4.3		3.5		7.8	13.5	2.1			15.6	141
	04	.7	6.4	.7	5.7		11.3	12.8	2.1			14.9	141
	07	.7	5.0	1.4	6.4		11.3	22.0	12.1	.7		31.2	141
	10		3.5	.7	4.3		8.5	17.7	18.4			33.3	141
	13		5.7		4.3		9.9	14.2	14.9			29.1	141
	16		5.4	.7	5.0		12.1	11.3	14.2	.7		25.5	141
	19		7.1	.7	5.7		12.8	11.3	4.3	.7		16.3	141
	22		7.1	1.4	5.7		14.2	12.8	5.7	1.4		19.9	141
TOTALS		.2	5.7	.7	5.1		11.0	14.5	9.2	.4		23.2	1128

## WEATHER CONDITIONS

14793

WILLOW GROVE, PENNSYLVANIA

73-77

MAR  
MONTH

STATION NAME

YEARS

PERCENTAGE FREQUENCY OF OCCURRENCE OF WEATHER  
CONDITIONS FROM HOURLY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBST TO VISION	TOTAL NO. OF OBS.
MAR	01		9.0	.6	.6		10.3	18.1	3.2	.6		20.6	155
	04		12.3		1.3		12.9	22.6	3.9			25.2	155
	07		12.3		.6		12.9	29.0	11.0			35.5	155
	10		14.2	.6	3.9		18.1	20.0	12.9			31.6	155
	13		12.3		3.2		15.5	19.4	11.0			29.7	155
	16	.6	12.9		1.3		14.2	16.8	10.3			26.5	155
	19		12.9		1.3		14.2	18.1	5.8			23.9	155
	22		11.0	.6	.6		12.3	18.7	3.9			22.6	155
TOTALS		.1	12.1	.2	1.6		13.8	20.3	7.8	.1		27.0	1240

# WEATHER CONDITIONS

5701 WEATHER CONDITIONS JAN 198

APR  
MONTH

73-77  
YEARS

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

14793  
STATION

## PERCENTAGE FREQUENCY OF OCCURRENCE OF WEATHER CONDITIONS FROM HOURLY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBST TO VISION	TOTAL NO. OF OBS.
APR	01		7.3		.7		8.0	13.3	3.3			15.3	150
	04		10.7		.7		11.3	15.3	2.7			17.3	150
	07		9.3				9.3	20.0	15.3			30.0	150
	10		13.3		.7		13.3	10.0	15.3			24.7	150
	13		12.7		.7		13.3	10.7	12.0			22.7	150
	16		9.3				9.3	8.0	15.3			22.0	150
	19	.7	10.0				10.0	8.7	14.0			22.7	150
	22	1.3	9.3				9.3	11.3	2.0			12.7	150
TOTALS		.3	10.2		.4		10.5	12.2	10.0			20.9	1200

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# WEATHER CONDITIONS

5701 WEATHER CONDITIONS JAN 1988

MAY  
MONTH

YEARS

73-77

WILLOW GROVE, PENNSYLVANIA

14793  
STATION

STATION NAME

## PERCENTAGE FREQUENCY OF OCCURRENCE OF WEATHER CONDITIONS FROM HOURLY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBS TO VISION	TOTAL NO. OF OBS.
MAY	01	.6	9.0				9.0	20.0	9.0			25.8	155
	04	.6	11.6				11.6	29.7	11.0			35.5	155
	07		9.0				9.0	32.3	20.6			43.9	155
	10		7.1		.6		7.1	15.5	13.5			27.1	155
	13		12.9				12.9	9.0	19.4			27.1	155
	16	1.9	14.2				14.2	7.1	26.5			31.6	155
	19	1.3	13.5				13.5	12.9	21.3			32.9	155
	22	1.3	12.3				12.3	14.9	14.3			27.9	154
TOTALS		.7	11.2		.1		11.2	17.7	17.0			31.5	1239

5701

WEATHER CONDITIONS JAN 1977

## WEATHER CONDITIONS

JUN  
MONTH

73-77

YEARS

WILLOW GROVE, PENNSYLVANIA

STATION NAME

14793

STATION

PERCENTAGE FREQUENCY OF OCCURRENCE OF WEATHER  
CONDITIONS FROM HOURLY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBST TO VISION	TOTAL NO. OF OBS.
JUN	01	2.0	11.3				11.3	30.7	19.3			42.7	150
	04	2.0	9.3				9.3	51.3	23.3			60.0	150
	07	1.3	9.3				9.3	38.7	42.0			62.0	150
	10		9.3				9.3	16.7	38.7			50.0	150
	13	2.7	10.7				10.7	8.7	36.7			44.0	150
	16	1.3	8.7				8.7	7.3	36.0			42.0	150
	19	4.7	10.7				10.7	8.0	34.7			42.0	150
	22	1.3	9.3				9.3	18.7	21.3			37.3	150
TOTALS		1.9	9.8				9.8	22.5	31.5			47.5	1200

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## WEATHER CONDITIONS

14793 STATION WILLOW GROVE, PENNSYLVANIA 73-77 YEARS JUL MONTH

PERCENTAGE FREQUENCY OF OCCURRENCE OF WEATHER  
CONDITIONS FROM HOURLY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBST TO VISION	TOTAL NO. OF OBS.
JUL	01	1.3	3.9				3.9	20.6	31.0			43.2	155
	04	1.3	6.5				6.5	38.1	33.5			51.6	155
	07	.6	4.5				4.5	39.4	44.5			65.2	155
	10	.6	5.2				5.2	8.4	46.5			51.6	155
	13	.6	1.9				1.9	3.2	45.2			47.7	155
	16	3.2	5.8				5.8	3.2	49.7			51.6	155
	19	.6	3.9				3.9	3.9	52.9			55.5	155
	22	3.2	4.5				4.5	14.8	37.4			45.2	155
TOTALS		1.4	4.5				4.5	16.5	42.6			51.5	1240

## WEATHER CONDITIONS

AUG  
MONTH

73-77

YEARS

WILLOW GROVE, PENNSYLVANIA

STATION NAME

14793

STATION

PERCENTAGE FREQUENCY OF OCCURRENCE OF WEATHER  
CONDITIONS FROM HOURLY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBST TO VISION	TOTAL NO. OF OBS.
AUG	01	1.3	3.9				3.9	31.6	34.2			52.3	155
	04	1.3	5.2				5.2	50.3	30.3			62.6	155
	07	1.9	8.4				8.4	58.1	41.9			74.8	155
	10	.6	6.5				6.5	16.1	52.3			61.9	155
	13		3.9				3.9	9.0	55.5			61.3	155
	16	5.8	7.7				7.7	6.5	55.5			58.7	155
	19	3.9	5.8				5.8	11.6	54.8			61.9	155
	22	1.9	5.2				5.2	18.1	38.1			50.3	155
TOTALS		2.1	5.8				5.8	25.2	45.3			60.5	1240

# WEATHER CONDITIONS

5701 WEATHER CONDITIONS JAN 1988

SEP  
MONTH

73-77

WILLOW GROVE, PENNSYLVANIA

14793

STATION

STATION NAME

YEARS

## PERCENTAGE FREQUENCY OF OCCURRENCE OF WEATHER CONDITIONS FROM HOURLY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBST TO VISION	TOTAL NO. OF OBS.
SEP	01	1.3	11.3				11.3	34.7	22.7			46.0	150
	04	2.0	10.7				10.7	42.7	22.7			48.7	150
	07	.7	10.7				10.7	52.0	31.3			60.7	150
	10	.7	13.3				13.3	18.7	38.7			52.0	150
	13	.7	10.7				10.7	9.3	39.3			45.3	150
	16	2.0	10.7				10.7	8.7	35.3			42.7	150
	19	.7	11.3				11.3	13.3	31.3			43.3	150
	22	2.0	14.0				14.0	19.3	24.0			39.3	150
TOTALS		1.3	11.6				11.6	24.8	30.7			47.3	1200

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5701

WEATHER CONDITIONS JAN 18

## WEATHER CONDITIONS

14793

WILLOW GROVE, PENNSYLVANIA

73-77

OCT

STATION

STATION NAME

YEARS

MONTH

PERCENTAGE FREQUENCY OF OCCURRENCE OF WEATHER  
CONDITIONS FROM HOURLY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBST TO VISION	TOTAL NO. OF OBS.
OCT	01		10.3				10.3	27.1	11.6			32.3	155
	04		11.0				11.0	32.9	9.0			35.5	155
	07		10.3				10.3	38.1	12.3			42.6	155
	10		11.6				11.6	18.7	23.2			39.4	155
	13		11.0				11.0	9.0	23.9			32.9	155
	16	.6	10.3				10.3	7.7	24.5			31.6	155
	19		9.0				9.0	11.6	16.1			27.1	155
	22		7.1				7.1	16.8	13.5			27.7	155
TOTALS		.1	10.1				10.1	20.2	16.8			33.6	1240

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## WEATHER CONDITIONS

NOV  
MONTH

73-77

YEARS

WILLOW GROVE, PENNSYLVANIA

STATION NAME

14793

STATION

PERCENTAGE FREQUENCY OF OCCURRENCE OF WEATHER  
CONDITIONS FROM HOURLY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBST TO VISION	TOTAL NO. OF OBS.
NOV	01		10.7				10.7	18.0	4.7			20.0	150
	04		12.0				12.0	19.3	3.3			21.3	150
	07		10.0				10.0	29.3	8.7			34.7	150
	10		8.0	.7	1.3		9.3	18.7	25.3			40.7	150
	13		6.7	.7	2.7		10.0	10.7	20.0			30.0	150
	16	.7	8.0				8.0	12.0	22.7			34.0	150
	19	.7	8.7		2.0		10.0	14.7	7.3			20.7	150
	22		10.7		.7		11.3	14.7	6.7			19.3	150
TOTALS		.2	9.4	.2	.8		10.2	17.2	12.3			27.6	1200

## WEATHER CONDITIONS

14793

STATION

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

DEC

MONTH

PERCENTAGE FREQUENCY OF OCCURRENCE OF WEATHER  
CONDITIONS FROM HOURLY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBST TO VISION	TOTAL NO. OF OBS.
DEC	01		8.4		2.6		11.0	16.1	4.5			20.0	155
	04		10.3		3.2		13.5	18.7	3.9	.6		23.2	155
	07		10.3	.6	3.2		13.5	23.2	4.5	.6		27.7	155
	10		11.0	.6	4.5		16.1	20.0	16.8			35.5	155
	13		9.0		3.2		12.3	12.9	14.8	.6		28.4	155
	16		12.9		5.8		18.7	11.6	15.5	.6		27.1	155
	19		10.3		3.2		13.5	15.5	7.1	1.3		23.9	155
	22		10.3		3.2		13.5	16.1	7.1	.6		23.2	155
TOTALS			10.3	.2	3.6		14.0	16.8	9.3	.5		26.1	1240

## WEATHER CONDITIONS

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

ALL  
MONTHPERCENTAGE FREQUENCY OF OCCURRENCE OF WEATHER  
CONDITIONS FROM HOURLY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBST TO VISION	TOTAL NO. OF OBS.
JAN	ALL		7.2	1.3	4.6		12.8	15.9	12.8	.3		27.3	1240
FEB		.2	5.7	.7	5.1		11.0	14.5	9.2	.4		23.2	1126
MAR		.1	12.1	.2	1.6		13.8	20.3	7.8	.1		27.0	1240
APR		.3	10.2		.4		10.5	12.2	10.0			20.9	1200
MAY		.7	11.2		.1		11.2	17.7	17.0			31.5	1239
JUN		1.9	9.8				9.8	22.5	31.5			47.5	1200
JUL		1.4	4.5				4.5	16.5	42.6			51.5	1240
AUG		2.1	5.8				5.8	25.2	45.3			60.5	1240
SEP		1.3	11.6				11.6	24.8	30.7			47.3	1200
OCT		.1	10.1				10.1	20.2	16.8			33.6	1240
NOV		.2	9.4	.2	.8		10.2	17.2	12.3			27.6	1200
DEC			10.3	.2	3.6		14.0	16.8	9.3	.5		26.1	1240
TOTALS		.7	9.0	.2	1.3		10.4	18.6	20.4	.1		35.3	14607

# WEATHER CONDITIONS ATMOSPHERIC PHENOMENA

ALL  
MONTH49-55, 57, 65-66, 68-77  
YEARSWILLOW GROVE, PENNSYLVANIA  
STATION NAME14793  
STATION

## PERCENTAGE OF DAYS WITH VARIOUS ATMOSPHERIC PHENOMENA FROM DAILY OBSERVATIONS

MONTH	HOURS (L.S.T.)	THUNDER- STORMS	RAIN AND/OR DRIZZLE	FREEZING RAIN &/OR DRIZZLE	SNOW AND/OR SLEET	HAIL	% OF OBS WITH PRECIP.	FOG	SMOKE AND/OR HAZE	BLOWING SNOW	DUST AND/OR SAND	% OF OBS WITH OBST TO VISION	TOTAL NO. OF OBS.
JAN	DAILY	.5	33.3	5.6	27.7		51.2	42.8	53.5	1.9		66.7	420
FEB		1.3	30.6	4.0	24.6		44.9	39.6	44.1	4.3		63.4	399
MAR		3.6	42.2	1.6	18.6	.2	51.8	43.3	47.5	1.6		63.2	446
APR		7.3	45.5	.7	5.1	.2	47.2	37.4	41.1	4.4		57.2	409
MAY		11.7	51.3		.2	1.1	51.9	55.4	60.6			71.4	462
JUN		17.8	47.9				47.9	61.9	74.8			84.1	428
JUL		21.6	41.8			.5	41.8	63.6	80.6			84.6	371
AUG		19.6	40.2			.2	40.2	66.3	82.6			86.2	448
SEP		9.8	39.2				39.2	69.2	70.8			82.0	367
OCT		2.5	36.3		1.2	.5	36.8	56.5	62.2			71.6	402
NOV		4.3	42.3	.7	10.2	.7	47.3	44.9	52.7			66.7	423
DEC		.5	39.4	4.0	25.9		53.9	43.6	49.4	2.5		67.3	401
TOTALS		8.4	40.8	1.4	9.5	.3	46.2	52.0	60.0	1.2		72.0	4986

# PERCENTAGE FREQUENCY OF WIND DIRECTION VS. WEATHER CONDITIONS

14793 WILLOW GROVE, PENNSYLVANIA JAN 1973-DEC 1977 ALL  
STATION NAME YEARS MONTH HOURS (L.S.T.)

WIND DIRECTION	RAIN	RAIN SHOWERS	DRIZZLE	FREEZING RAIN FREEZING DRIZZLE	SLEET "SHOWERS ICE CRYSTALS	SNOW "GRAINS "PELLETS "SHOWERS	HAIL SMALL HAIL	THUNDER	FOG	ICE FOG GROUND FOG	SMOKE HAZE	BLOWING SNOW	BLOWING SAND AND DUST	NO WEATHER
N	11.5		1.6	1.6		11.5			23.0		13.1			62.3
NNE	11.8					11.8			23.5	5.9	17.6			47.1
NE	21.1		5.3			10.5			26.3		5.3			57.9
ENE	12.9		16.1	9.7		9.7			41.9	3.2	19.4			29.0
E	14.3	1.8	7.1	5.4		8.9			26.8	5.4	23.0			39.3
ESE	11.5	3.8	3.8			11.5			34.6	11.5	23.1			30.8
SE	14.3		3.6		3.6	7.1			14.3	7.1	32.1			42.9
SSE	8.3		4.2	4.2	4.2				8.3	8.3	41.7			41.7
S	19.1					2.1			25.5		27.7			42.6
SSW	6.5		2.2			2.2			17.4	4.3	23.9			54.3
SW	4.3					2.2			15.2	4.3	15.2			63.0
WSW						4.3			2.9		11.4			82.9
W	1.3					.9			8.4	1.3	7.1			84.9
WNW	1.3	.7				2.6			4.6	.7	5.3	.7		88.1
NW	2.8		.7			3.5			5.6		5.6	.7		86.6
NNW	7.1		1.2			4.7			9.4	3.5	5.9	2.4		77.6
VARIABLE														
CALM	3.6	.6	4.2	4.2	4.2	4.0			16.9	4.2	12.9			62.7
TOTAL	69	4	24	16	2	55			165	32	156	4		867
% TOTAL	5.6	.3	1.9	1.3	.2	4.4			13.3	2.6	12.6	.3		69.9

TOTAL NUMBER OF OBSERVATIONS 1,240

# PERCENTAGE FREQUENCY OF WIND DIRECTION VS. WEATHER CONDITIONS

14793 STATION NAME: WILLOW GROVE, PENNSYLVANIA JAN 1973-DEC 1977 YEARS MONTH FEBRUARY ALL HOURS (L.S.T.)

WIND DIRECTION	RAIN	RAIN SHOWERS	DRIZZLE	FREZING RAIN FREEZING DRIZZLE	SLEET SHOWERS ICE CRYSTALS	SNOW GRAINS PELLETS SHOWERS	HAIL SMALL HAIL	THUNDER	FOG	ICE FOG GROUND FOG	SMOKE HAZE	BLOWING SNOW	BLOWING SAND AND DUST	NO WEATHER
N			1.7			20.3			15.3		8.5			72.9
NNE	8.8		5.9	8.8	2.9	17.6			26.5					55.9
NE			7.4	3.7	3.7	14.8		3.7	18.5		3.7			66.7
ENE	16.2		2.7	2.7		13.5			35.1		5.4			48.6
E	11.5	6.6	4.9	4.9	1.6	6.6			36.1		9.8			47.5
ESE	8.0					4.0			28.0	4.0	8.0			56.0
SE	16.7								33.3					66.7
SSE	20.8	8.3	4.2			4.2			37.5		20.8			41.7
S	9.8	3.9	2.0						17.6	2.0	15.7			62.7
SSW	2.9	1.5				1.5			4.4		13.2			79.4
SW						1.7			8.3	1.7	13.0			73.3
WSW	1.8	1.8							8.8	1.8	12.3			77.2
W	1.3	.6	.6			1.3			8.9	1.9	6.6			82.2
WNW	.7					.7			5.1		3.5	.7		91.2
NW	2.5					5.8		.9	6.5		4.7	1.9		86.0
NNW	1.1		1.1		1.1	6.5			4.3		6.5	7.2		85.9
VARIABLE														
CALM														
TOTAL	42	12	14	8	6	52		2	152	11	103	5		835
% TOTAL	3.7	1.1	1.2	.7	.5	4.6		.2	13.5	1.0	9.1	.4		74.0

TOTAL NUMBER OF OBSERVATIONS 1,128

# PERCENTAGE FREQUENCY OF WIND DIRECTION VS. WEATHER CONDITIONS

14793 STATION NAME WILLOW GROVE, PENNSYLVANIA JAN 1973-DEC 1977 YEARS MONTH MARCH ALL HOURS (L.S.T.)

WIND DIRECTION	RAIN	RAIN SHOWERS	DRIZZLE	FREZING RAIN FREEZING DRIZZLE	SLEET SHOWERS ICE CRYSTALS	SNOW GRAINS PELLETS SHOWERS	HAIL SMALL HAIL	THUNDER	FOG	ICE FOG GROUND FOG	SMOKE HAZE	BLOWING SNOW	BLOWING SAND AND DUST	NO WEATHER
N	2.0		3.9	3.9		3.9			15.7	2.0	2.0			76.3
NNE	4.0	4.0	4.0						20.0	4.0		4.0		72.0
NE	10.8		3.4		2.7	2.7			29.7	2.7	3.4			64.9
ENE	11.6	2.3	14.0	2.3	2.3	9.3			48.8	2.3				44.2
E	14.3	1.9	15.2			4.8			47.6	6.7	8.6			36.2
ESE	16.3	1.3	11.3						40.0	2.3	21.3			38.8
SE	28.8	1.9	1.9						38.3	1.9	13.4			40.4
SSE	15.4	5.1							12.8	5.1	30.8			46.2
S	4.3	4.3	2.2						10.9	6.3	17.4			63.0
SSW	3.3	3.0	1.7						13.3		13.3			71.7
SW	4.3	3.2				1.6			9.7	6.3	9.7			72.6
WSW	2.4	2.4	2.4					.9	7.1		14.3			78.6
W		4.3							6.0	2.6	.9			86.3
WNW	6.5	1.4	.7			1.4			2.2	4.3	4.3			86.3
NW	3.6					1.5			3.6	2.9	2.2			89.8
NNW	1.0								4.1	2.1	2.1			92.8
VARIABLE														
CALM														
TOTAL	86	23	45	3	2	18		1	208	44	93	1		874
% TOTAL	6.9	1.9	3.6	.2	.2	1.5		.1	16.8	3.5	7.7	.1		70.3

TOTAL NUMBER OF OBSERVATIONS 1,240

PERCENTAGE FREQUENCY OF WIND DIRECTION  
VS. WEATHER CONDITIONS

STATION 14793 WILLOW GROVE, PENNSYLVANIA JAN 1973-DEC 1977 MONTH APRIL ALL HOURS (L.S.T.)

WIND DIRECTION	RAIN	RAIN SHOWERS	DRIZZLE	FREEZING RAIN FREEZING DRIZZLE	SLEET " SHOWERS ICE CRYSTALS	SNOW " GRAINS " PELLETS " SHOWERS	HAIL SMALL HAIL	THUNDER	FOG	ICE FOG GROUND FOG	SMOKE HAZE	BLOWING SNOW	BLOWING SAND AND DUST	NO WEATHER
N	7.8	2.6	1.3			1.3		1.3	6.3	2.6	6.3			81.8
NNE	10.3	2.6							12.8		2.6			84.6
NE	15.0	20.0							30.0		15.0			50.0
ENE	11.1	3.7	3.7					3.7	33.3		7.4			59.3
E	24.2	6.1	7.6						43.3	4.3	18.2			33.3
ESE	16.7	3.3	13.3					3.3	36.7	3.3	20.0			33.3
SE	20.7								24.1		10.3			65.3
SSE	22.2	7.4	3.7						25.9		14.8			53.6
S	5.9	11.8							2.9	17.6	20.6			58.8
SSW	2.8	4.2							2.8	4.2	13.9			77.8
SW	2.6	2.6	1.3						6.6	2.6	17.1			75.0
WSW	1.2	2.4							4.8	1.2	15.3			79.8
W	1.4	3.3							2.1	1.4	6.4			88.7
WNW	3.3	1.7				.8			3.3	.8	6.6			86.0
NW	2.0	.7	2.0			1.3			2.0	.7	4.0			90.0
NNW	1.7	.9							2.6	.9	3.4			93.2
VARIABLE														
CALM	1.1	8.6							13.3	6.7	13.3			70.0
TOTAL	68	40	16			4		3	117	29	118			924
% TOTAL	5.7	3.3	1.3			.3		.3	9.8	2.4	9.8			77.0

TOTAL NUMBER OF OBSERVATIONS

1,200

PERCENTAGE FREQUENCY OF WIND DIRECTION  
VS. WEATHER CONDITIONS

14793 STATION NAME WILLow GROVE, PENNSYLVANIA JAN 1973-DEC 1977 YEARS MONTH MAY ALL HOURS (L.S.T.)

WIND DIRECTION	RAIN	RAIN SHOWERS	DRIZZLE	FREEZING RAIN FREEZING DRIZZLE	SLEET "SHOWERS ICE CRYSTALS	SNOW GRAINS "PELLETS "SHOWERS	HAIL SMALL HAIL	THUNDER	FOG	ICE FOG GROUND FOG	SMOKE HAZE	BLOWING SNOW	BLOWING SAND AND DUST	NO WEATHER
N	1.5	8.8							4.4		4.4			82.4
NNE		5.4							10.8	2.7	16.2			70.3
NE	4.3		4.3						34.8		4.3			60.9
ENE	13.8	6.9						3.4	27.6	3.4	20.7			44.8
E	21.2	1.5	10.6						43.9	3.0	18.2			36.4
ESE	18.9	1.9	1.9						45.3	7.3	22.6			35.8
SE	26.5	8.8							26.5	5.9	29.4			38.2
SSE	11.3	9.4	3.8					3.8	15.1	1.9	22.6			52.8
S	12.0	4.8	2.4						15.7	3.6	14.3			61.4
SSW	3.1	5.1	1.0					1.0	8.2	4.1	21.4			62.2
SW	2.3	1.3							7.6	2.3	21.3			67.1
WSW	1.4	2.7						1.4	5.3	6.8	16.4			72.6
W	.7	2.9						.7	7.9	3.0	18.6			70.7
WNW	2.1	6.4				1.1		2.1	3.2	3.2	11.7			78.7
NW	2.1	4.2							1.0	1.0	6.3			86.3
NNW		5.2						1.7	5.2		13.8			75.9
VARIABLE														
CALM	3.9	8.6	6.6						13.3	12.9	22.6			56.1
TOTAL	72	53	15			1		9	163	56	210			798
% TOTAL	5.8	4.3	1.2			.1		.7	13.2	4.5	16.9			64.4

TOTAL NUMBER OF OBSERVATIONS 1,239

# PERCENTAGE FREQUENCY OF WIND DIRECTION VS. WEATHER CONDITIONS

STATION 14793 WILLOW GROVE, PENNSYLVANIA JAN 1973-DEC 1977 MONTH JUNE ALL HOURS (L.S.T.)

WIND DIRECTION	RAIN	RAIN SHOWERS	DRIZZLE	FREEZING RAIN FREEZING DRIZZLE	SLEET "SHOWERS" ICE CRYSTALS	SNOW "GRAINS" "PELLETS" "SHOWERS"	HAIL SMALL HAIL	THUNDER	FOG	ICE FOG GROUND FOG	SMOKE HAZE	BLOWING SNOW	BLOWING SAND AND DUST	NO WEATHER
N	6.8		2.3						6.8	2.3	13.6			75.0
NNE	8.0		8.0						16.0		20.0			64.0
NE	5.6	5.6	8.3						25.0	2.8	33.3			41.7
ENE	14.0	4.0	4.0						32.0	6.0	30.0			40.0
E		12.3	4.2						31.3	8.3	29.2			37.5
ESE	5.0	2.5	2.5						40.0	5.0	25.0			37.5
SE	7.3	7.3	2.4					2.4	22.0	4.9	24.4			46.3
SSE	8.1	3.2	3.2					1.6	33.9	6.5	29.0			38.7
S	4.8	6.7	2.9					2.9	15.2	9.5	33.3			47.6
SSW	3.3	7.7						5.3	11.0	4.4	41.8			40.7
SW		8.5						1.2	6.1	3.7	35.4			56.1
WSW		5.7	1.1					5.7	10.2	9.1	45.5			42.0
W	7	3.5						2.1	9.2	7.1	34.0			55.3
WNW	1.0	1.0							11.0	7.0	31.0			57.0
NW	3.6	3.6	1.8						10.7	3.6	33.9			57.1
NNW	1.7	3.4						3.4	3.4	1.7	15.3			76.3
VARIABLE														
CALM	2.3	6.1						1.3	18.2	14.4	29.5			43.5
TOTAL	4.0	6.0	2.0					23	189	81	378			602
% TOTAL	3.3	5.0	1.7					1.9	15.8	6.8	31.5			50.2

TOTAL NUMBER OF OBSERVATIONS 1,200

# PERCENTAGE FREQUENCY OF WIND DIRECTION VS. WEATHER CONDITIONS

14793 STATION NAME HILLW GROVE, PENNSYLVANIA JAN 1973-DEC 1977 YEARS MONTH JULY ALL HOURS (L.S.T.)

WIND DIRECTION	RAIN	RAIN SHOWERS	DRIZZLE	FREEZING RAIN FREEZING DRIZZLE	SLEET SHOWERS ICE CRYSTALS	SNOW GRAINS PELLETS SHOWERS	HAIL SMALL HAIL	THUNDER	FOG	ICE FOG GROUND FOG	SMOKE HAZE	BLOWING SNOW	BLOWING SAND AND DUST	NO WEATHER
N	1.1	2.2							6.6	1.1	23.1			72.5
NNE		4.2							4.2	4.2	23.0			75.0
NE	4.5		4.5						13.6	9.1	27.3			54.5
ENE	5.9	5.9							47.1	11.8	35.3			23.5
E	3.4	3.4							24.1		44.8			34.5
ESE		5.3							15.8	5.3	68.4			21.1
SE	2.7	5.4	2.7					7.3	27.0		45.9			32.4
SSE	2.4	17.1						1.7	14.6	2.4	39.0			43.9
S								1.1	5.1	6.8	52.5			40.7
SSW		5.7						1.1	8.0	4.6	54.0			39.1
SW	1.3	2.6						1.3	5.2	6.3	54.5			37.7
WSW		5.4						2.7	8.9	9.8	57.1			33.9
W		3.0						1.8	4.3	6.7	46.3			46.3
WNW									9.2	3.1	53.1			40.8
NW		5.4						2.2	4.3	4.3	29.0			64.5
NNW		2.2	1.1					1.1	3.4	3.4	19.1			75.3
VARIABLE														
CALM	1.1	2.2						1.7	14.7	15.3	39.8			62.5
TOTAL	9	44	3					18	123	81	526			589
% TOTAL	.7	3.5	.2					1.5	9.9	6.3	42.4			47.5

TOTAL NUMBER OF OBSERVATIONS 1,240

# PERCENTAGE FREQUENCY OF WIND DIRECTION VS. WEATHER CONDITIONS

14793 WILLOW GROVE, PENNSYLVANIA JAN 1973-DEC 1977 ALL  
STATION NAME STATION YEAR MONTH HOURS (L.S.T.)

WIND DIRECTION	RAIN	RAIN SHOWERS	DRIZZLE	FREEZING RAIN FREEZING DRIZZLE	SLEET SHOWERS ICE CRYSTALS	SNOW GRAINS PELLETS SHOWERS	HAIL SMALL HAIL	THUNDER	FOG	ICE FOG GROUND FOG	SMOKE HAZE	BLOWING SNOW	BLOWING SAND AND DUST	NO WEATHER
N	1.6								9.5	1.6	25.4			68.3
NNE	5.7	5.7	2.9						11.4	5.7	37.1			45.7
NE		19.4						6.5	25.8	3.2	19.4			51.6
ENE		4.9	2.4					2.4	24.4	17.1	39.0			36.6
E	1.7	6.8	1.7					1.7	22.0	11.9	42.4			30.5
ESE		4.8						4.8	19.0		52.4			38.1
SE	3.8	15.4						11.5	30.8	3.8	26.9			38.5
SSE	2.8	5.6						36.1	5.6	41.7				30.6
S	4.0	6.0	4.0					2.0	24.0	4.0	58.0			24.0
SSW		5.8						5.4	17.6	2.7	39.3			25.7
SW	1.2	6.7						2.3	26.7	8.1	32.3			26.7
WSW		4.3						3.2	11.7	20.2	74.3			13.8
W	.7	2.1						1.4	11.1	6.9	61.8			27.8
WNW	1.7	3.4	.9					1.7	7.7	13.7	50.4			38.5
NW		2.3						1.3	6.3	6.3	32.3			57.5
NNW		2.3								2.3	29.6			70.6
VARIABLE														
CALM	1.0	1.3						1.3	18.3	16.8	33.2			41.1
TOTAL	14	51	7					26	194	118	562			475
% TOTAL	1.1	4.1	.6					2.1	15.6	9.5	43.3			38.3

TOTAL NUMBER OF OBSERVATIONS 1,240

# PERCENTAGE FREQUENCY OF WIND DIRECTION VS. WEATHER CONDITIONS

14793 STATION NAME: WILLOW GROVE, PENNSYLVANIA JAN 1973-DEC 1977 MONTH: SEPTEMBER ALL HOURS (L.S.T.)

WIND DIRECTION	RAIN	RAIN SHOWERS	DRIZZLE	FREEZING RAIN FREEZING DRIZZLE	SLEET SHOWERS ICE CRYSTALS	SNOW GRAINS PELLETS SHOWERS	HAIL SMALL HAIL	THUNDER	FOG	ICE FOG GROUND FOG	SMOKE HAZE	BLOWING SNOW	BLOWING SAND AND DUST	NO WEATHER
N	8.3	3.3						3.3	10.0	3.3	15.0			71.7
NNE	22.0	2.4	2.4						19.5	2.4	9.8			56.1
NE	19.2	3.8	7.7					3.8	26.9	7.7	7.7			53.8
ENE	11.6	7.0	16.3						41.9	9.3	14.0			39.5
E	18.8	7.2	18.8					2.9	46.4	7.2	14.5			33.3
ESE	9.8	9.8	4.9						29.3	7.3	24.4			41.5
SE	2.2		2.2						11.1	4.4	8.9			73.3
SSE	8.1	8.1	2.7					5.4	29.7	13.5	35.1			29.7
S		7.7	1.9					1.9	19.2	9.6	48.1			28.8
SSW	1.6	4.8	1.6						14.3	6.3	46.0			39.7
SW	1.7	1.7							8.6	13.8	51.7			39.7
WSW	3.3	6.6							14.8	13.1	62.3			29.5
W	2.1	2.3						.8	12.4	7.8	40.3			50.4
WNW	1.1	4.3	1.1					3.2	7.5	5.4	38.7			51.6
NW		2.5						1.3	3.8	2.5	21.5			74.7
NNW		6.2							3.7	2.5	13.6			79.0
VARIABLE														
CALM														
TOTAL	56	49	34					15	192	106	367			609
% TOTAL	4.7	4.1	2.8					1.3	16.0	8.8	30.6			50.8

TOTAL NUMBER OF OBSERVATIONS 1,200

# PERCENTAGE FREQUENCY OF WIND DIRECTION VS. WEATHER CONDITIONS

14793 STATION NAME: WILLOW GROVE, PENNSYLVANIA JAN 1973-DEC 1977 YEARS MONTH OCTOBER ALL HOURS (L.S.T.)

WIND DIRECTION	RAIN	RAIN SHOWERS	DRIZZLE	FREEZING RAIN FREEZING DRIZZLE	SLEET SHOWERS ICE CRYSTALS	SNOW GRAINS PELLETS SHOWERS	HAIL SMALL HAIL	THUNDER	FOG	ICE FOG GROUND FOG	SMOKE HAZE	BLOWING SAND AND DUST	NO WEATHER
N	3.0	4.5							6.1	3.0	10.6		77.3
NNE	6.1	4.1	4.1						16.3	4.1	10.2		67.3
NE	12.7	5.5	10.9						36.4	10.9	12.7		34.5
ENE	10.0	1.4	14.3						32.9	5.7	11.4		47.1
E	13.3	1.5	4.6						26.2	4.6	26.2		41.5
ESE	10.0	3.3	3.3						13.3	3.3	30.0		50.0
SE	20.0	15.0	5.0					5.0	40.0	5.0	25.0		30.0
SSE	10.7	7.1							28.6	7.1	25.0		39.3
S	25.0	5.8							34.6	1.9	30.8		34.6
SSW	2.3	2.3							7.0	9.3	32.6		55.8
SW	3.2	1.6							7.9	3.2	20.6		68.3
WSW	1.5								11.9	10.4	13.4		65.7
W		3.3							5.0	5.0	16.7		74.2
WNW		.8							6.5	4.1	8.1		82.1
NW	1.0	4.0							5.0	4.0	11.9		80.2
NNW	1.9	1.9							3.7		3.7		90.7
VARIABLE													
CALM	2.7	1.3	6.6						11.1	11.8	23.9		54.4
TOTAL	63	38	24					1	169	82	206		791
% TOTAL	5.1	3.1	1.9					.1	13.6	6.6	16.6		63.6

TOTAL NUMBER OF OBSERVATIONS 1,240

# PERCENTAGE FREQUENCY OF WIND DIRECTION VS. WEATHER CONDITIONS

14793 HILLOW GROVE, PENNSYLVANIA JAN 1973-DEC 1977 NOVEMBER ALL  
STATION NAME YEARS MONTH HOURS (U.S.T.)

WIND DIRECTION	RAIN	RAIN SHOWERS	DRIZZLE	FREEZING RAIN FREEZING DRIZZLE	SLEET SHOWERS ICE CRYSTALS	SNOW GRAINS PELLETS SHOWERS	HAIL SMALL HAIL	THUNDER	FOG	ICE FOG GROUND FOG	SMOKE HAZE	BLOWING SNOW	BLOWING SAND AND DUST	NO WEATHER
N											10.0			90.0
NNE	3.6	3.6	3.6						17.9					78.6
NE	18.2		13.6	9.1					31.8					50.0
ENE	34.4		34.4						75.0		6.3			15.6
E	22.6	1.9	20.8			1.9			66.0	1.9	7.5			26.4
ESE	4.0		20.0						44.0		20.0			32.0
SE	4.5		4.5						22.7	4.5	31.8			40.9
SSE	5.3	5.3	5.3						42.1	2.6	31.6			34.2
S	7.1	4.8	2.4			2.4			19.0	7.1	9.5			59.5
SSW	4.1	5.4							12.2	2.7	25.7			56.8
SW		4.2							6.9	1.4	19.4			70.8
WSW	2.4	2.4						1.2	4.8	7.1	19.0			64.3
W	2.1	1.0							2.1	2.1	11.5			82.2
WNW	1.6	1.6				1.6		.8	5.7	.8	4.1			86.9
NW	.8		2.4			.8			1.6	.8	4.0			91.3
NNW	6.7					5.6			6.7	2.2	6.7			81.1
VARIABLE														
CALM	3.0		3.0						16.1	7.4	16.1			67.8
TOTAL	56	19	41	2		10		2	172	34	148			833
% TOTAL	4.7	1.6	3.4	.2		.8		.2	14.3	2.8	12.3			69.6

TOTAL NUMBER OF OBSERVATIONS 1,200

# PERCENTAGE FREQUENCY OF WIND DIRECTION VS. WEATHER CONDITIONS

14793 STATION NAME: WILLOW GROVE, PENNSYLVANIA JAN 1973-DEC 1977 YEARS MONTH: DECEMBER ALL HOURS (L.S.T.)

WIND DIRECTION	RAIN	RAIN SHOWERS	DRIZZLE	FREEZING RAIN FREEZING DRIZZLE	SLEET "SHOWERS ICE CRYSTALS	SNOW "GRAINS "PELLETS "SHOWERS	HAIL SMALL HAIL	THUNDER	FOG	ICE FOG GROUND FOG	SMOKE HAZE	BLOWING SNOW	BLOWING SAND AND DUST	NO WEATHER
N	6.6				6.8	13.6			13.6		5.1			71.2
NNE	5.0				2.5	12.5			15.0		10.0			65.0
NE	16.2		2.7			5.6			37.8	2.7	18.9			40.5
ENE	26.2	4.9	6.6						37.7	1.6	14.8			37.7
E	20.4	2.0		2.0		2.0			36.7		14.3			44.9
ESE	14.3	4.8	4.8	4.8					42.9		14.3			42.9
SE	42.9		4.8						38.1	4.8	14.3			33.3
SSE	22.6	9.7				6.5			19.4		22.6			48.6
S	24.5	3.8							24.5	1.9	30.2			45.3
SSW	14.3	5.4				1.8			17.9	1.8	19.6			53.6
SW	3.5		1.8			3.5			5.3		17.5			73.7
WSW	1.4	1.4	1.4			2.8			11.3	5.6	12.7			66.2
W			.8			1.5			5.3	1.5	5.3			87.0
WNW	4.1		.7			3.4			6.2	1.4	1.4	2.7		84.9
NW	3.1	.8	.8		.8	3.1			7.1		2.4	.8		86.6
NNW	1.0		2.0			5.1			6.1		3.1	2.0		86.7
VARIABLE														
CALM	2.3		1.1			1.6			14.3	6.6	6.0			74.3
TOTAL	98	15	16	2	6	42			183	25	115	7		867
% TOTAL	7.9	1.2	1.3	.2	.5	3.4			16.8	2.0	9.3	.6		69.9

TOTAL NUMBER OF OBSERVATIONS 1,240

PERCENTAGE FREQUENCY OF WIND DIRECTION  
VS. WEATHER CONDITIONS

14793 STATION NAME HILLOW GROVE, PENNSYLVANIA JAN 1973-DEC 1977 YEARS MONTH ALL HOURS (L.S.T.) ALL

WIND DIRECTION	RAIN	RAIN SHOWERS	DRIZZLE	FREEZING RAIN FREEZING DRIZZLE	SLEET SHOWERS ICE CRYSTALS	SNOW GRAINS PELLETS SHOWERS	HAIL SMALL HAIL	THUNDER	FOG	ICE FOG GROUND FOG	SMOKE HAZE	BLOWING SNOW	BLOWING SAND AND DUST	NO WEATHER
N	4.3	2.1	1.0	.4	.5	4.1		.4	9.9	1.4	11.9			74.6
NNE	7.4	2.8	2.5	.8	.5	3.3			16.0	2.3	11.9	.3		65.5
NE	10.4	4.3	6.2	.8	.6	2.5		1.1	29.0	3.9	13.5			50.4
ENE	14.3	3.3	10.0	1.0	.2	2.5		.6	38.7	5.0	16.2			39.9
E	14.6	4.3	9.0	1.0	.1	2.2		.4	39.0	4.8	19.7			36.8
ESE	11.2	3.2	6.1	.2		1.0		.5	34.5	4.4	25.3			38.4
SE	15.3	4.4	2.2		.3	.5		1.4	26.4	3.5	22.6			46.0
SSE	10.7	7.3	2.3	.2	.2	.7		1.8	25.5	4.5	29.8			41.8
S	9.3	4.9	1.6			.3		.9	17.8	5.8	30.3			47.5
SSW	3.4	4.8	.5			.4		1.3	10.8	3.6	31.4			54.1
SW	2.0	2.8	.2			.6		.5	9.7	4.5	28.7			59.3
WSW	1.1	3.1	.3			.6		1.4	8.5	7.8	32.3			56.0
W	1.0	2.1	.1			.3		.6	6.8	3.9	20.9			70.2
WNW	2.2	1.6	.3			1.1		.6	5.6	3.5	16.2	.4		74.7
NW	1.9	1.6	.7		.1	1.5		.4	4.5	1.9	10.6	.3		81.8
NNW	1.9	1.6	.5		.1	1.9		.4	4.4	1.5	9.4	.6		83.1
VARIABLE														
CALM	2.1	1.9	1.3	.4	.1	.8		.5	18.5	11.6	22.6			57.0
TOTAL	673	408	259	31	14	182		100	2027	699	2984	17		9064
% TOTAL	4.6	2.8	1.8	.2	.1	1.2		.7	13.9	4.8	20.4	.1		62.1

TOTAL NUMBER OF OBSERVATIONS 14,607

## PART B      PRECIPITATION, SNOWFALL & SNOW DEPTH

This portion of the Uniform Summary presents in two sets of tables, the daily amounts and extreme values of the following:

### PRECIPITATION

#### SNOWFALL\*

#### SNOW DEPTH

#### DERIVED FROM DAILY OBSERVATIONS

#### DERIVED FROM DAILY OBSERVATIONS

#### DERIVED FROM DAILY OBSERVATIONS

1. The first table for each of the above presents the percentage frequency of various daily amounts, by month and annual, all years combined. The percentage of days with measurable amounts is also computed monthly and annually. Also shown for the precipitation and snowfall tables, are the monthly mean amounts, annual mean amounts (sum of monthly mean amounts), and the extreme monthly amounts (greatest and least). The latter statistics above are not presented for the snow depth summary since they would have limited use and may be misleading.
2. The second set of tables for each of the above presents the extreme daily amounts by individual year and month for the entire period of record available. Also provided are the means and standard deviations for each month and annual (all months). The extremes for a month are not printed nor used in computations if one or more observations are missing.

NOTE: Snow depth was recorded and punched at various hours during the period available from U. S. operated stations. The periods and hours used in the snow depth summary vary by service and period as follows:

Air Force Stations	From beginning of record thru 1945	Snow depth at 0800 LST
	Jan 46-May 57	Snow depth at 1230 GCT
	Jun 57-present	Snow depth at 1200 GCT
U. S. Navy and Weather Bureau Stations	From beginning of record thru Jun 52	Snow depth at 0030 GCT
	Jul 52-May 57	Snow depth at 1230 GCT
	Jun 57-present	Snow depth at 1200 GCT

\* Hail was included in snowfall occurrence in the summary of the day observation prior to Jan 1956,

# DAILY AMOUNTS

PERCENTAGE FREQUENCY OF  
PRECIPITATION  
(FROM DAILY OBSERVATIONS)

14793

WILLOW GROVE, PENNSYLVANIA

65-67, 49-57, 66-77

STATION

STATION NAME

YEARS

5722 Daily Amounts Jan. 1969

AMOUNTS (INCHES)																			PERCENT OF DAYS WITH MEASUR- ABLE AMTS	TOTAL NO. OF OBS.	MONTHLY AMOUNTS (INCHES)		
PRECIP.	NONE	TRACE	.01	.02-.05	.06-.10	.11-.25	.26-.50	.51-1.00	1.01-2.50	2.51-5.00	5.01-10.00	10.01-20.00	OVER 20.00	MEAN	GREATEST	LEAST							
SNOWFALL	NONE	TRACE	0.1-0.4	0.5-1.4	1.5-2.4	2.5-3.4	3.5-4.4	4.5-6.4	6.5-10.4	10.5-15.4	15.5-25.4	25.5-50.4	OVER 50.4										
SNOW- DEPTH	NONE	TRACE	1	2	3	4-6	7-12	13-24	25-36	37-48	49-60	61-120	OVER 120										
JAN	50.5	15.9	1.1	6.5	6.1	7.3	6.8	4.7	1.1					33.5	558	2.90	5.73	.60					
FEB	53.8	14.5	1.0	7.6	3.7	7.3	4.7	6.2	1.2					31.7	593	2.67	4.59	1.21					
MAR	49.4	14.6	2.2	5.8	3.2	6.8	7.8	7.0	3.2					36.0	589	4.41	6.53	2.16					
APR	53.0	11.3	1.4	8.6	4.4	5.6	7.0	6.5	2.2					35.7	630	3.65	8.22	1.52					
MAY	49.3	11.6	1.1	8.0	4.9	9.1	5.5	7.2	3.2					39.1	527	4.19	7.50	1.37					
JUN	53.0	10.5	2.5	7.0	4.8	7.7	6.7	5.3	2.0	.3	.2			36.5	600	3.91	8.80	1.16					
JUL	56.5	11.8	1.9	5.9	3.4	7.0	6.1	4.2	2.5	.8				31.7	527	4.11	3.84	1.02					
AUG	58.6	10.9	2.2	5.8	4.2	4.2	4.6	5.3	3.1	1.2				30.6	589	4.86	13.99	1.57					
SEP	59.7	9.2	1.7	5.1	4.3	6.7	5.1	5.1	2.7	.5				31.1	630	3.78	7.21	1.41					
OCT	62.1	12.7	1.9	5.4	2.4	4.2	4.4	3.4	3.1	.3				25.1	589	3.24	6.73	.47					
NOV	54.6	13.0	.7	6.1	5.6	6.7	5.1	6.3	1.6	.4				32.5	570	3.46	9.26	.51					
DEC	47.1	17.2	1.4	8.2	3.9	8.2	4.8	5.0	3.9					35.7	558	3.80	7.14	.31					
ANNUAL	54.0	12.8	1.6	6.7	4.2	6.7	5.7	5.5	2.5	.3	.0			33.3	6960	4.98							

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# DAILY AMOUNTS

PERCENTAGE FREQUENCY OF  
SNOWFALL  
(FROM DAILY OBSERVATIONS)

14793 STATION WILLOW GROVE, PENNSYLVANIA 45-47, 49-57, 66-77 YEARS

PRECIP.	NONE	TRACE	01	.02-.05	.06-10	11-25	26-50	51-100	101-250	251-500	501-1000	1001-2000	OVER 2000	PERCENT OF DAYS WITH MEASURABLE AMTS	TOTAL NO. OF OBS.	MONTHLY AMOUNTS (INCHES)		
																MEAN	GREATEST	LEAST
SNOWFALL	NONE	TRACE	0.1-0.4	0.5-1.4	1.5-2.4	2.5-3.4	3.5-4.4	4.5-6.4	6.5-10.4	10.5-15.4	15.5-25.4	25.5-50.4	OVER 50.4					
SNOW-DEPTH	NONE	TRACE	1	2	3	4-6	7-12	13-24	25-36	37-48	49-60	61-120	OVER 120					
JAN	71.8	17.9	1.8	4.2	1.8	1.2	.6	.4			.2			10.3	496	5.7	19.9	TRACE
FEB	75.2	16.0	1.9	3.0	1.7	.6	.7	.7	.2					8.8	537	4.5	14.5	TRACE
MAR	83.2	12.1	.6	1.0	1.1	.8	.6	.3	.2					4.7	620	3.5	14.6	.0
APR	96.0	3.0	.3	.2	.2	.3								1.0	600	.5	6.2	.0
MAY	99.6	.4													527	TRACE	TRACE	.0
JUN	100.0														570	.0	.0	.0
JUL	100.0														496	.0	.0	.0
AUG	100.0														589	.0	.0	.0
SEP	100.0														600	.0	.0	.0
OCT	99.2	.7			.2									.2	589	.1	1.9	.0
NOV	90.7	8.0	.5		.3			.3	.2					1.3	600	1.1	8.0	.0
DEC	76.5	17.6	.7	2.0	1.4	.5	.5	.2	.4	.2				5.9	558	4.4	29.9	TRACE
ANNUAL	91.0	6.3	.5	.9	.6	.3	.2	.2	.1	.0	.0			2.7	6782	19.8		



# EXTREME VALUES

PRECIPITATION  
(FROM DAILY OBSERVATIONS)

45-57, 66-77

WILLOW GROVE, PENNSYLVANIA

14793

STATION NAME

STATION

YEARS

## 24 HOUR AMOUNTS IN INCHES

5723 Extreme Values Jan 1969

MONTH YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ALL MONTHS
45				1.68		1.97	2.78	1.37	1.67		1.13		
46		.66				2.20							
47				1.10									
48													
49		.61		1.02				.93	.89	.59	.27		
50		1.00	2.04	.72	1.35	.48	2.48	4.16	.96	1.04		1.33	
51	1.18	1.08	1.22	.40	1.28	.96	.75	1.80	.62		2.35		
52	.81	.73	2.39	2.33		1.68			2.58	.38	1.98	1.13	
53	1.58	.94	1.26	1.11	1.09	1.03	1.66	2.25	1.39	1.74	.48	1.20	2.25
54	.36	.68	.99	.98	.75	.69	1.27	2.65	1.00	.80	.95	.82	2.65
55	.28	.88	1.28	.86	.59	1.01	.85	3.69	1.12	2.58	.68	.17	3.69
56	.62	1.03	1.53	1.18	1.25	1.33	1.12	1.14	1.27	1.41	1.75	1.24	1.75
57	.69	.87	.85										
58													
59													
60													
61													
62													
63													
64													
65													
66									3.18	3.44	.75	1.08	
67	.99	1.10	2.10	.91	1.35	1.00	1.66	1.75	.93	1.05	.66	1.53	2.10
68	2.21	.64	1.12	1.95	1.93	2.97	.48	.77	.58	1.14		1.26	
69	.55	.67	1.47	.91	1.28	1.47	3.36	.92	1.52	.55	.87	1.41	3.36
70	.52	1.14	1.05	2.07	.59	1.36		2.54	.51	1.79	.90	.73	
71	1.55	1.13	.79	1.01	1.17	.47	1.97	2.87	2.74	2.38	.78	.24	2.87
72	.60	.94	.98	.83	2.01	2.67	2.54	.68	1.12	1.12	4.14	1.08	4.14
73	.84	1.41	.82	.92	.83	5.65	.69	3.24	1.96	1.99	.42	1.52	5.65
74	.56	.75	2.01	.90	1.18	.87	.70	2.47	2.25	1.59	.70	1.89	2.47
75	.68	.69	2.18	1.11	.81	1.69	3.71	1.64	2.15	.90	1.05	1.53	3.71
76	1.37	.56	.51	.72	1.49	.67	.42	1.47	1.01	1.18	.40	1.02	1.49
MEAN													
S. D.													
TOTAL OBS.													

NAVWEASERVCOM

**PRECIPITATION**  
(FROM DAILY OBSERVATIONS)

STATION	STATION NAME	YEARS
14793	WILLOW GROVE, PENNSYLVANIA	45-57, 66-77

45-57, 66-77

WILLOW GROVE, PENNSYLVANIA

STATION

STATION NAME	STATION NO.	STATION TYPE	STATION CLASS	STATION CODE	STATION NAME	STATION NO.	STATION TYPE	STATION CLASS	STATION CODE
STATION NAME	STATION NO.	STATION TYPE	STATION CLASS	STATION CODE	STATION NAME	STATION NO.	STATION TYPE	STATION CLASS	STATION CODE

YEARS

24 HOUR AMOUNTS IN INCHES

[illegible]

NAVWEASERVCOM

5723 Extreme Values Jan 1969

# EXTREME VALUES

## PRECIPITATION (FROM DAILY OBSERVATIONS)

14793 STATION WILLOW GROVE, PENNSYLVANIA 45-57, 66-77 YEARS

24 HOUR AMOUNTS IN INCHES  
/BASED ON LESS THAN FULL MONTHS/

MONTH YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ALL MONTHS
45		.49 27	.52 29		1.10 30					.52 30		.62 21	PRECIP DAYS
46	1.30 28		.17 13	.22 7	1.09 14		3.40 25	2.96 6	1.02 29	.20 1	.58 29	3.05 5	PRECIP DAYS
47	.57 7	.55 3	1.60 9		1.32 18	.94 10	.95 13	.51 13	1.18 14	2.30 29	2.40 29		PRECIP DAYS
48	1.28 10	.71 11	.71 17	1.21 12	1.79 16	1.36 20	1.75 11	1.05 11	1.00 8	.65 15	.70 18	1.29 15	PRECIP DAYS
49	1.20 14		.86 28		1.30 27	.35 27	1.50 29					.75 30	PRECIP DAYS
50	.42 30										.49 29		PRECIP DAYS
51										1.60 30		1.30 30	PRECIP DAYS
52					0		0	0					PRECIP DAYS
57				0	0	0	0	0	0	0	0	0	PRECIP DAYS
58	0	0	0	0	0	0	0	0	0	0	0	0	PRECIP DAYS
59	0	0	0	0	0	0	0	0	0	0	0	0	PRECIP DAYS
60	0	0	0	0	0	0	0	0	0	0	0	0	PRECIP DAYS
61	0	0	0	0	0	0	0	0	0	0	0	0	PRECIP DAYS
62	0	0	0										PRECIP DAYS
65	0	0	0	0	0	0	0	0	0	0	0	0	PRECIP DAYS
MEAN													
S. D.													
TOTAL OBS.													

NAVWEASERVCOM

5723 Extreme Values Jan 1969

192599

PRECIPITATION  
(FROM DAILY OBSERVATIONS)

WILLOW GROVE, PENNSYLVANIA

45-57, 66-77

STATION NAME

YEARS

24 HOUR AMOUNTS IN INCHES  
/BASED ON LESS THAN FULL MONTHS/

[illegible]

NAVWEASERVCOM

# EXTREME VALUES

## SNOWFALL

(FROM DAILY OBSERVATIONS)

14793

WILLOW GROVE, PENNSYLVANIA

45-57, 66-77

STATION NAME

YEARS

### 24 HOUR AMOUNTS IN INCHES

MONTH YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ALL MONTHS
45				.0		.0	.0	.0	.0		.0		
46		.1	.0			.0							
47				.0									
48													
49			1.4	TRACE	.0	.0		.0	.0	.0	TRACE	.2	1.0
50		1.0	TRACE	.0	.0	.0	.0	.0	.0	.0	TRACE		
51	.6	TRACE	3.8	TRACE	.0	.0	.0	.0	.0	TRACE	2.0	.4	4.5
52	.3	TRACE	.4	TRACE	TRACE	.0	.0	.0	.0	.0	TRACE	TRACE	8.0
53			TRACE	TRACE	.0	.0	.0	.0	.0	.0	TRACE	.8	5.7
54	1.1	3.7	2.0	.0	.0	.0	.0	.0	.0	.0			
55	3.3	1.2	2.7	3.1	.0	.0	.0	.0	.0	.0			
56	1.6	4.9	2.0										
57													
58													
59													
60													
61													
62													
63													
64													
65	TRACE	3.7	3.4	TRACE	.0	.0	.0	.0	.0	.0	TRACE	11.6	5.3
66	2.5	.3	2.2	.0	.0	.0	.0	.0	.0	.0	.0	3.0	7.7
67	2.2	6.7	7.1	.0	.0	.0	.0	.0	.0	.0	.2	7.7	15.8
68	5.2	3.2	3.0	TRACE	.0	.0	.0	.0	.0	.0	TRACE	TRACE	6.0
69	15.8	1.0	2.5	1.5	.0	.0	.0	.0	.0	.0	TRACE	TRACE	3.0
70	2.0	6.0	TRACE	.3	.0	.0	.0	.0	.0	1.9	TRACE	TRACE	5.0
71	TRACE	1.5	TRACE	TRACE	.0	.0	.0	.0	.0	.0	TRACE	3.0	6.0
72	4.0	5.0	TRACE	TRACE	.0	.0	.0	.0	.0	.0	TRACE	2.0	5.0
73	5.6	6.0	.2	TRACE	.0	.0	.0	.0	.0	.0	.0	1.7	6.0
74	2.5	2.0	3.1	TRACE	.0	.0	.0	.0	.0	.0	TRACE	5.2	5.2
75													
76													
MEAN													
S. D.													
TOTAL OBS.													

NAVWEASERVCOM

523 Extreme Values Jan 1969



# EXTREME VALUES

SNOWFALL

(FROM DAILY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

45-57, 66-77

YEARS

24 HOUR AMOUNTS IN INCHES  
/BASED ON LESS THAN FULL MONTHS/

MONTH YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ALL MONTHS
45		2.5 27	.0 30		.0 30					.0 30		6.0 20	SNOWFALL DAYS
46	2.5 28			0	0		.0 26	0	.0 29	0	0	TRACE 1	SNOWFALL DAYS
47	2.0 1	4.0 4	2.0 6		0	0	.0 1	0	0	0	.0 28		SNOWFALL DAYS
48	4.3 8	6.5 6	2.0 1	0	0	.0 1	0	0	.0 1	0	0	TRACE 1	SNOWFALL DAYS
49	4.0 2	5.0 27	2.5 27	.0 27	.0 25	.0 13	.0 14		.0 29			1.0 30	SNOWFALL DAYS
50	TRACE 30	2.0 27					.0 30						SNOWFALL DAYS
51										0		6.0 30	SNOWFALL DAYS
52	2.5 30				0	.0 26	0	0					SNOWFALL DAYS
54	6.0 30							0					SNOWFALL DAYS
57				0	0	0	0	.0 1	0	0	0	0	SNOWFALL DAYS
58	0	0	0	0	0	0	0	0	0	0	0	0	SNOWFALL DAYS
59	0	0	0	0	0	0	0	0	0	0	0	0	SNOWFALL DAYS
60	0	0	0	0	0	0	0	0	0	0	0	0	SNOWFALL DAYS
61	0	0	0	0	0	0	0	0	0	0	0	0	SNOWFALL DAYS
62	0	0	0										SNOWFALL DAYS
MEAN													
S. D.													
TOTAL OBS.													

NAVWEASERVCOM

5723 Extreme Values Jan 1969

FROM DAILY OBSERVATIONS)

45-57, 66-77

WILLOW GROVE, PENNSYLVANIA

STATION NAME

YEARS

24 HOUR AMOUNTS IN INCHES  
/BASED ON LESS THAN FULL MONTHS/

[illegible]

NAVWEASERVCOM

5723 Extreme Values Jan 1969

# EXTREME VALUES

SNOW DEPTH  
(FROM DAILY OBSERVATIONS)

14793 STATION NAME WILLON GROVE, PENNSYLVANIA 45, 47-62, 65-77 YEARS

## DAILY SNOW DEPTH IN INCHES

MONTH YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ALL MONTHS
45													
46													
47													
48													
49													
50													
51	0				0	0	0	0			0		
52		0											
53	4	TRACE	1	0	0	0	0	0	0	0	0	0	10
54	10	1	1	TRACE	0	0	0	0	0	0	0	TRACE	6
55	1	4	1	0	0	0	0	0	0	0	0	6	1
56	4	1	13	4	0	0	0	0	0	0	TRACE	TRACE	13
57	2	5	2		0					TRACE			
58												2	
59													
60	1		13		0		0	0	0	0	0	11	
61		20	1	0	0		0	0	0	0		4	
62	2	6											
63		1	4	3		0	0	0	0	0	0	0	
64	9	11	0	0	0	0	0	0	0	0	0	20	20
65	7	11	5	TRACE	0	0	0	0	0	0	0	5	11
66	6	TRACE	2	0	0	0	0	0	0	0	0	3	
67	2	5	12		0	0	0	0	0	0	0	6	12
68	11	3	3	0	0	0	0	0	0	0	0	1	
69	14	TRACE	2	2	0	0	0	0	0	0	0	TRACE	14
70	4	6	TRACE	TRACE	0	0	0	0	0	1	0	TRACE	6
71	TRACE	0	0	0	0	0	0	0	0	0	0	5	5
72	4	5	TRACE	TRACE	0	0	0	0	0	0	0	0	5
73	3	6	TRACE	0	0	0	0	0	0	0	0	2	6
74	3	2	5	0	0	0	0	0	0	0	TRACE	6	6
75													
76													
MEAN													
S. D.													
TOTAL OBS.													

NAVWEASERVCOM

5723 Extreme Values Jan 1969



# EXTREME VALUES

SNOW DEPTH  
(FROM DAILY OBSERVATIONS)

14793 STATION WILLLOW GROVE, PENNSYLVANIA 45, 47-62, 65-77 YEARS

DAILY SNOW DEPTH IN INCHES  
/BASED ON LESS THAN FULL MONTHS/

MONTH YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ALL MONTHS
45		0	0	0	0	0	0	0	0	0	0	0	SNOW DPTH DAYS
46	0	0	0	0	0	0	0	0	0	0	0	0	SNOW DPTH DAYS
47	0	0	0	0	0	0	0	0	0	0	0	0	SNOW DPTH DAYS
48	0	0	0	0	0	0	0	0	0	0	0	0	SNOW DPTH DAYS
49	0	4	30	0	0	0	0	0	0	0	0	0	SNOW DPTH DAYS
50	0	22	14	9	1	0	0	2	0	0	0	0	SNOW DPTH DAYS
51	0	TRACE	0	3	0	0	0	0	0	0	0	0	SNOW DPTH DAYS
52	0	24	0	1	0	0	0	0	0	0	0	0	SNOW DPTH DAYS
53	1	1	1	0	0	2	0	0	0	0	1	1	SNOW DPTH DAYS
57			29	1		25	30	0	0		0	0	SNOW DPTH DAYS
58	0	0	0	28	0	0	0	0	29	0	0	0	SNOW DPTH DAYS
59	0	0	0	0	0	0	0	0	0	0	0	0	SNOW DPTH DAYS
60		0	0	0	0	0	0	0	0	0			SNOW DPTH DAYS
61	13	0		0		0							SNOW DPTH DAYS
62	29		8			29					0		SNOW DPTH DAYS
62			30										SNOW DPTH DAYS
MEAN													
S. D.													
TOTAL OBS.													

NAVWEASERVCOM

5723 Extreme Values Jan 1969

## (FROM DAILY OBSERVATIONS)

WILLOW GROVE, PENNSYLVANIA

STATION NAME	STATION NO.	STATION TYPE	STATION CLASS	STATION CODE	STATION NAME	STATION NO.	STATION TYPE	STATION CLASS	STATION CODE
STATION NAME	STATION NO.	STATION TYPE	STATION CLASS	STATION CODE	STATION NAME	STATION NO.	STATION TYPE	STATION CLASS	STATION CODE

YEARS

DAILY SNOW DEPTH IN INCHES  
/BASED ON LESS THAN FULL MONTHS/

[illegible]

NAVWEASERVCOM

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

14793 WILLOW GROVE, PENNSYLVANIA  
STATION NAME

JANUARY  
MONTH

DAY	PRECIPITATION GREATEST			SNOWFALL GREATEST		
	INCHES	MM	DATE	INCHES	MM	DATE
1	1.58	40	1971	15.8	401	1971
2	1.28	33	1948	2.0	51	1947
3	0.32	8	1976	0.0	20	1968
4	0.99	25	1971	1.3	33	1952
5	1.20	30	1949	0.2	5	1952
6	0.44	11	1975	3.1	79	1970
7	0.52	13	1970	5.2	132	1970
8	0.79	20	1953	0.2	5	1953
9	0.93	24	1953	4.0	102	1974
10	1.32	34	1977	2.5	63	1954
11	0.34	9	1954	0.0	152	1954
12	0.32	8	1948	1.3	33	1970
13	1.08	27	1948	4.3	109	1948
14	2.21	56	1968	3.5	89	1977
15	0.05	1	1947	1.2	30	1957
16	0.36	9	1954	0.4	10	1957
17	0.33	8	1952	3.3	84	1956
18	0.64	16	1975	7	7	1975*
19	0.45	11	1973	2.8	71	1956
20	0.60	15	1975	5.6	142	1975
21	1.30	33	1946	2.5	63	1946
22	0.81	21	1952	1.1	28	1955
23	0.69	18	1957	1.0	25	1971
24	1.58	40	1953	2.6	66	1971
25	0.36	9	1975	0.6	15	1955
26	0.72	18	1952	7	7	1977*
27	1.37	35	1976	2.0	51	1972
28	0.69	18	1952	2.5	63	1952
29	0.51	13	1973	0.5	13	1971
30	0.62	16	1956	7	7	1976*
31	0.71	18	1951	4.0	102	1949
Monthly	2.21	56	1968	15.8	401	1971

# DAILY EXTREME AMOUNTS

1946-1962 1965-1977  
YEARS

FEBRUARY  
MONTH

DAY	PRECIPITATION GREATEST			SNOWFALL GREATEST		
	INCHES	MM	DATE	INCHES	MM	DATE
1	0.63	16	1957	4.9	124	1957
2	1.41	36	1973	3.7	94	1955
3	0.85	22	1970	0.2	5	1974
4	0.73	19	1952	6.5	165	1948
5	0.50	13	1971	1.5	38	1975
6	0.88	22	1955	2.0	51	1972
7	1.10	28	1967	1.0	25	1951*
8	0.55	14	1947	4.0	102	1974*
9	0.69	18	1950	6.7	170	1969
10	1.14	29	1970	2.8	71	1967
11	0.68	17	1955	2.1	53	1955
12	0.60	15	1975	6.0	152	1975
13	1.13	29	1971	7	7	1975*
14	0.65	17	1950	3.2	81	1970
15	0.94	24	1953	1.0	25	1970
16	0.34	9	1952	1.5	38	1973
17	0.39	10	1956	1.5	38	1967
18	1.03	26	1956	3.7	94	1967
19	0.94	24	1972	6.0	152	1972
20	0.66	17	1946	3.6	91	1969
21	1.00	25	1951	0.9	23	1967
22	0.76	19	1971	4.0	102	1948
23	0.74	19	1967	2.9	74	1967
24	1.13	29	1977	0.4	10	1956
25	0.75	19	1974	5.0	127	1974
26	0.87	22	1957	7	7	1973*
27	0.25	6	1971	7	7	1970*
28	0.71	18	1948	5.0	127	1949
29	0.64	16	1968	0.2	5	1968
30						
31	1.41	36	1973	6.7	170	1969
Monthly						

\* ALSO ON EARLIER YEARS

T - TRACE, AN AMOUNT TOO SMALL TO MEASURE

BLANK UNDER SNOWFALL INDICATES NO SNOWFALL FOR PERIOD OF RECORD

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

14793 STATION  
WILLOW GROVE, PENNSYLVANIA  
STATION NAME

MARCH  
MONTH

1945-1962 1965-1977  
YEARS

# DAILY EXTREME AMOUNTS

APRIL  
MONTH

DAY	PRECIPITATION GREATEST			SNOWFALL GREATEST		
	INCHES	MM	DATE	INCHES	MM	DATE
1	1.25	32	1947	3.8	97	1952
2	1.25	32	1947	7.1	180	1969
3	0.96	24	1954	3.3	89	1969
4	1.14	29	1953	2.0	51	1971*
5	0.79	20	1967	3.4	86	1967
6	1.15	29	1967	T	T	1970*
7	2.10	53	1967	2.0	51	1969
8	1.48	38	1956	0.4	10	1953
9	0.85	22	1957	5.1	130	1976
10	0.31	8	1949	0.2	5	1975
11	2.39	61	1952	T	T	1976*
12	1.12	28	1968	1.1	28	1968
13	1.18	30	1977	T	T	1970*
14	1.60	41	1947	T	T	1975*
15	1.28	33	1953	T	T	1972*
16	0.93	24	1974	4.0	102	1956
17	0.98	25	1972	1.8	46	1967
18	0.84	21	1968	3.9	99	1956
19	2.18	55	1975	5.7	145	1956
20	0.55	14	1970	0.4	10	1977
21	1.16	29	1974	3.4	86	1967
22	2.04	52	1950	2.5	63	1967
23	0.88	22	1949	0.3	13	1971
24	1.47	37	1969	T	T	1977*
25	0.86	22	1954	T	T	1957*
26	0.82	21	1973	T	T	1957
27	0.32	8	1948	T	T	1957
28	0.35	9	1948	T	T	1957
29	1.05	27	1970	3.0	76	1970
30	2.01	51	1974	T	T	1969*
31	0.43	11	1974	T	T	1974*
Monthly	2.39	61	1952	7.1	180	1969

DAY	PRECIPITATION GREATEST			SNOWFALL GREATEST		
	INCHES	MM	DATE	INCHES	MM	DATE
1	1.21	31	1948	T	T	1970*
2	2.07	53	1970			
3	0.40	10	1975			
4	0.94	24	1977	T	T	1977*
5	1.76	45	1952	T	T	1952
6	0.65	17	1971	1.5	38	1971
7	1.18	30	1956	3.1	79	1956
8	0.92	23	1973	3.1	79	1956
9	0.83	21	1974	T	T	1974
10	1.02	26	1953	T	T	1974
11	0.28	7	1948	T	T	1973
12	0.86	22	1955	T	T	1973
13	0.90	23	1974	T	T	1950
14	1.95	50	1970	T	T	1950
15	0.43	11	1952			
16	1.00	25	1947			
17	0.81	21	1954			
18	1.02	26	1949			
19	0.58	15	1969			
20	0.98	25	1970	T	T	1953
21	0.52	13	1947			
22	0.91	23	1969			
23	0.46	12	1973			
24	1.95	50	1968			
25	1.68	43	1945			
26	0.89	23	1977			
27	2.33	59	1952	T	T	1967
28	0.66	17	1952			
29	0.26	7	1951			
30	0.20	5	1950			
31						
Monthly	2.33	59	1952	3.1	79	1956

\* ALSO ON EARLIER YEARS  
T - TRACE, AN AMOUNT TOO SMALL TO MEASURE  
BLANK UNDER SNOWFALL INDICATES NO SNOWFALL FOR PERIOD OF RECORD

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

# DAILY EXTREME AMOUNTS

14793 STATION  
WILLOW GROVE, PENNSYLVANIA  
STATION NAME

1945-1962 1965-1977  
YEARS

MAY  
MONTH

JUNE  
MONTH

DAY	PRECIPITATION GREATEST			SNOWFALL GREATEST		
	INCHES	MM	DATE	INCHES	MM	DATE
1	1.49	38	1976	T	T	1953
2	1.30	33	1949			
3	2.01	51	1972			
4	0.86	22	1947			
5	1.79	45	1948			
6	0.93	24	1956			
7	1.35	34	1967			
8	0.57	14	1953			
9	1.41	36	1972	T	T	1977
10	1.10	28	1945			
11	1.05	27	1951			
12	1.18	30	1974			
13	1.27	32	1948			
14	0.97	25	1972			
15	1.09	28	1946			
16	0.83	21	1948			
17	1.09	28	1953			
18	1.35	34	1950			
19	0.84	21	1946			
20	1.28	33	1969			
21	0.73	19	1975			
22	1.25	32	1956			
23	1.28	33	1951			
24	0.64	16	1949			
25	0.53	13	1947			
26	0.95	24	1953			
27	0.93	24	1946			
28	1.93	49	1968			
29	1.12	28	1968			
30	1.04	26	1948			
31	0.81	21	1975			
Monthly	2.01	51	1972	T	T	1977*

DAY	PRECIPITATION GREATEST			SNOWFALL GREATEST		
	INCHES	MM	DATE	INCHES	MM	DATE
1	1.68	43	1952			
2	2.20	56	1946			
3	0.89	23	1951			
4	0.48	12	1950			
5	0.89	23	1975			
6	0.77	20	1977			
7	0.74	19	1953			
8	1.01	26	1955			
9	0.87	22	1977			
10	0.57	14	1945			
11	0.76	19	1953			
12	2.97	75	1968			
13	1.03	26	1953			
14	1.47	37	1969			
15	0.50	13	1969			
16	0.92	23	1972			
17	0.28	7	1972			
18	0.99	25	1970			
19	1.97	50	1945			
20	0.92	23	1977			
21	1.36	35	1970			
22	2.67	68	1972			
23	0.87	22	1974			
24	1.03	26	1968			
25	0.45	11	1972			
26	0.44	11	1975			
27	0.38	10	1951			
28	0.74	19	1977			
29	5.65	144	1973			
30	0.58	15	1967			
31						
Monthly	5.65	144	1973			

\* ALSO ON EARLIER YEARS

T - TRACE, AN AMOUNT TOO SMALL TO MEASURE

BLANK UNDER SNOWFALL INDICATES NO SNOWFALL FOR PERIOD OF RECORD

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

# DAILY EXTREME AMOUNTS

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

1945-1962 1965-1977  
YEARS

JULY  
MONTH

DAY	PRECIPITATION GREATEST			SNOWFALL GREATEST		
	INCHES	MM	DATE	INCHES	MM	DATE
1	0.42	11	1954			
2	1.53	39	1945			
3	0.64	16	1967			
4	0.44	11	1951			
5	1.12	28	1945			
6	0.53	13	1953			
7	1.07	27	1969			
8	0.23	6	1947			
9	0.53	13	1971			
10	2.48	63	1950			
11	0.32	8	1950			
12	1.50	38	1949			
13	3.71	94	1975			
14	1.75	44	1948			
15	0.62	21	1950			
16	0.42	11	1967			
17	1.95	50	1945			
18	2.78	71	1945			
19	2.35	60	1945			
20	0.81	21	1956			
21	1.12	28	1956			
22	1.50	38	1946			
23	3.40	86	1946			
24	1.00	25	1975			
25	1.58	40	1970			
26	0.88	22	1945			
27	0.71	18	1969			
28	3.36	85	1969			
29	0.56	14	1967			
30	1.97	50	1971			
31	0.25	6	1970			
Monthly	3.71	94	1975			

AUGUST  
MONTH

DAY	PRECIPITATION GREATEST			SNOWFALL GREATEST		
	INCHES	MM	DATE	INCHES	MM	DATE
1	2.96	75	1946			
2	3.24	82	1973			
3	4.16	106	1950			
4	0.92	23	1969			
5	0.79	20	1956			
6	0.70	18	1976			
7	0.55	14	1946			
8	1.10	28	1955			
9	2.65	67	1954			
10	1.00	25	1967			
11	0.67	17	1955			
12	3.41	87	1955			
13	1.98	50	1955			
14	0.65	17	1976			
15	0.23	6	1970			
16	0.47	12	1975			
17	0.56	14	1968			
18	3.69	94	1955			
19	0.51	13	1950			
20	1.14	29	1956			
21	1.30	33	1955			
22	1.05	27	1948			
23	2.54	65	1970			
24	1.64	42	1975			
25	0.62	16	1945			
26	0.55	14	1972			
27	2.87	73	1971			
28	1.70	43	1971			
29	0.92	23	1949			
30	0.47	12	1974			
31	2.27	58	1954			
Monthly	4.16	106	1950			

\* ALSO ON EARLIER YEARS

T - TRACE, AN AMOUNT TOO SMALL TO MEASURE  
BLANK UNDER SNOWFALL INDICATES NO SNOWFALL FOR PERIOD OF RECORD

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

1945-1962 1965-1977  
YEARS

# DAILY EXTREME AMOUNTS

SEPTEMBER  
MONTH

DAY	PRECIPITATION GREATEST			SNOWFALL GREATEST		
	INCHES	MM	DATE	INCHES	MM	DATE
1	2.58	66	1952			
2	1.12	28	1972			
3	1.37	35	1969			
4	0.40	10	1947			
5	1.39	35	1953			
6	1.27	32	1956			
7	0.90	23	1974			
8	0.23	6	1969			
9	0.33	8	1970			
10	1.16	30	1947			
11	1.71	43	1945			
12	0.84	21	1953			
13	2.74	70	1971			
14	3.18	81	1966			
15	0.62	16	1951			
16	1.01	26	1976			
17	1.52	39	1969			
18	1.87	47	1945			
19	0.28	7	1952			
20	0.90	23	1975			
21	2.01	51	1966			
22	0.67	17	1975			
23	2.15	55	1975			
24	1.19	30	1975			
25	1.40	36	1977			
26	0.29	7	1976			
27	0.59	15	1956			
28	2.25	57	1974			
29	0.93	24	1967			
30	0.63	16	1976			
31						
Monthly	3.18	81	1966			

OCTOBER  
MONTH

DAY	PRECIPITATION GREATEST			SNOWFALL GREATEST		
	INCHES	MM	DATE	INCHES	MM	DATE
1	1.08	27	1966			
2	0.48	12	1973			
3	0.44	11	1976			
4	0.37	9	1956			
5	0.49	12	1948			
6	0.84	21	1972			
7	1.60	41	1951			
8	0.65	17	1948			
9	0.81	21	1976			
10	2.38	60	1971			
11	0.90	23	1951			
12	0.16	4	1948			
13	0.14	4	1974			
14	2.58	66	1955			
15	1.58	40	1955			
16	1.59	40	1974			
17	0.90	23	1975	T	T	1977
18	0.74	19	1975	T	T	1972
19	3.44	87	1966	1.9	48	1972
20	1.18	30	1976	T	T	1952
21	1.03	27	1970			
22	1.79	45	1970			
23	1.41	36	1956			
24	1.13	29	1971			
25	1.05	27	1967			
26	0.59	15	1949			
27	0.69	18	1953			
28	2.30	58	1947			
29	1.99	51	1973	T	T	1952
30	0.58	15	1955			
31	0.65	17	1956			
Monthly	3.44	87	1966	1.9	48	1972

\* ALSO ON EARLIER YEARS

T - TRACE, AN AMOUNT TOO SMALL TO MEASURE

BLANK UNDER SNOWFALL INDICATES NO SNOWFALL FOR PERIOD OF RECORD

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

14793 STATION  
WILLOW GROVE, PENNSYLVANIA  
STATION NAME

NOVEMBER  
MONTH

DAY	PRECIPITATION GREATEST			SNOWFALL GREATEST		
	INCHES	MM	DATE	INCHES	MM	DATE
1	1.75	44	1956			
2	1.16	29	1956			
3	0.85	22	1951	T	T	1954*
4	1.02	26	1947			
5	0.61	15	1969	T	T	1973
6	0.45	11	1953	4.5	114	1953
7	3.11	79	1977	1.5	38	1953
8	4.14	105	1972	T	T	1976
9	0.33	8	1969	T	T	1976*
10	0.95	24	1968	T	T	1971*
11	0.90	23	1947	T	T	1976*
12	1.05	27	1975	5.9	150	1968
13	0.59	15	1975	T	T	1977*
14	1.50	38	1972	T	T	1967
15	0.76	19	1952	T	T	1972*
16	0.37	9	1951			
17	0.58	15	1946	T	T	1967*
18	0.62	16	1956	T	T	1951
19	0.87	22	1969	8.0	203	1955
20	1.02	26	1952	T	T	1969*
21	1.98	50	1952	T	T	1974*
22	0.99	25	1945	T	T	1972*
23	0.70	18	1977			
24	0.54	14	1971	T	T	1976*
25	0.62	16	1971	T	T	1977*
26	0.65	17	1951	T	T	1977*
27	0.40	10	1948	0.1	3	1950
28	0.75	19	1966	0.2	5	1950
29	1.13	29	1945	T	T	1977*
30	0.85	22	1972	5.3	135	1967
31						
Monthly	4.14	105	1972	8.0	203	1955

\* ALSO ON EARLIER YEARS

T - TRACE, AN AMOUNT TOO SMALL TO MEASURE

BLANK UNDER SNOWFALL INDICATES NO SNOWFALL FOR PERIOD OF RECORD

DIRNAVOCEANMET-SMOS

5724 DAILY AMOUNTS MAR 1978

# DAILY EXTREME AMOUNTS

1945-1962 1965-1977  
YEARS

DECEMBER  
MONTH

DAY	PRECIPITATION GREATEST			SNOWFALL GREATEST		
	INCHES	MM	DATE	INCHES	MM	DATE
1	0.40	10	1977	T	T	1975*
2	0.52	13	1974	0.2	5	1952
3	1.53	39	1967	T	T	1969*
4	1.33	34	1950	T	T	1976*
5	1.08	27	1973*	T	T	1977*
6	0.90	23	1972	T	T	1977*
7	1.13	29	1950	1.0	25	1977*
8	1.08	27	1972	T	T	1975*
9	0.98	25	1973	2.0	51	1955
10	1.41	36	1969	T	T	1974*
11	1.13	29	1952	2.4	61	1945
12	1.02	26	1967	T	T	1977*
13	0.91	23	1966	4.4	112	1966
14	1.24	31	1956	6.0	152	1951
15	0.80	20	1948	6.0	152	1945
16	1.89	48	1974	3.0	76	1973
17	0.37	9	1970	2.5	63	1973
18	1.19	30	1977	1.5	38	1951
19	0.35	9	1977	5.2	132	1945
20	1.30	33	1951	8.5	216	1966
21	1.20	30	1977	1.5	38	1966
22	1.34	34	1969	1.7	43	1975
23	0.29	7	1949	0.8	20	1955
24	0.65	17	1966	11.6	295	1966
25	0.46	12	1969	3.8	97	1969
26	1.53	39	1975	7.7	196	1969
27	0.42	11	1949	0.8	20	1956
28	1.09	28	1967	2.0	51	1966
29	3.05	77	1946	T	T	1976*
30	1.29	33	1948	T	T	1977*
31	0.66	17	1975	4.3	109	1967
Monthly	3.05	77	1946	11.6	295	1966

## PART C

## SURFACE WINDS

Presented in this part are various tabulations of surface winds as follows:

1. Extreme Values - Peak Gusts: Derived from daily observations and presented by individual year and month for the entire period of record available. Speeds are presented in knots, while directions are given in 16 compass points from the beginning of record through 1963, and in tens of degrees starting in January 1964. When 90% or more of the daily observations of peak gust wind data are available for a month, the extreme is selected and printed. These values are then used to compute means and standard deviations for the entire period. Every month of a year must have valid observations present before the ALL MONTHS value is selected for that year. Means and standard deviations are computed when four or more values are present for any column. A supplementary list of Peak Gusts by year-month with < 90% observations reported is also provided.

NOTE: According to Circular N specifications, "peak gust data are recorded only at stations with continuous instantaneous wind-speed recorders."

2. Bivariate Percentage frequency tabulations: Derived from 3-hourly observations, these tabulations are a percentage frequency of wind directions to 16 compass points and calm by wind speeds (knots) in increments of Beaufort classifications. Percentages are shown by both direction and speed, and in addition the mean wind speed for each direction.

A separate category is provided on the form for variable winds, which are reported in some data sources. In these data where light and variable winds are reported with no directions but with speeds given, the speeds will be summarized in the appropriate groups opposite the column headed VARBL.

- a. Three tables are prepared for all surface winds included, and for all years combined as follows:
  - (1) Annual - all hours combined
  - (2) By month - all hours combined
  - (3) By month - by standard 3-hour groups
- b. A separate annual table is also presented for surface winds meeting the following ceiling and visibility conditions: **INSTRUMENT CLASS**: Ceiling 200 through 1400 feet inclusive with visibility equal to or greater than 1/2 mile, and/or visibility 1/2 through 2-1/2 miles inclusive with ceiling equal to or greater than 200 feet.

**SURFACE WINDS**  
(FROM DAILY OBSERVATIONS)

STATION	STATION NAME	YEARS
14793	WILLOW GROVE, PENNSYLVANIA	45-62, 65-77

45-62, 65-77

WILLOW GROVE, PENNSYLVANIA

STATION NAME

STATION

DAILY PEAK GUSTS IN KNOTS

[illegible]

NAVWEASERVCOM

**SURFACE WINDS**  
(FROM DAILY OBSERVATIONS)

STATION	STATION NAME	YEARS
14793	WILLOW GROVE, PENNSYLVANIA	45-62, 65-77

### DAILY PEAK GUSTS IN KNOTS

[illegible]

NAVWEASERVCOM

5723 Extreme Values Jan 1969

# EXTREME VALUES

## SURFACE WINDS

(FROM DAILY OBSERVATIONS)

14793 WILLUM GROVE, PENNSYLVANIA 45-620 65-77

STATION NAME

STATION

YEARS

DAILY PEAK GUSTS IN KNOTS  
/BASED ON LESS THAN 90% OBSERVATIONS FOR MONTH/

MONTH YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ALL MONTHS
45												E 32 19	WINDS DAYS
46							N 26 26		N 26 17	NW 30 26			WINDS DAYS
47							NW 33 26						WINDS DAYS
48			SSW 43 25		SW 37 21		NW 45 27						WINDS DAYS
49								N 32 17					WINDS DAYS
50				NW 43 26									WINDS DAYS
55		NW 36 23											WINDS DAYS
56			E 41 26					NNE 27 26					WINDS DAYS
57						WSW 34 21					NNE 37 13		WINDS DAYS
58	ENE 45 21												WINDS DAYS
70							N 34 15						WINDS DAYS
71						SW 17 24		SW 38 27					WINDS DAYS
72				24 2007 26 25 23				19 26 26					WINDS DAYS
76								26 20 0 11					WINDS DAYS
77			31 4527 42 2 22										WINDS DAYS
MEAN													
S. D.													
TOTAL OBS.													

NAVWEASERVCOM

5723 Extreme Values Jan 1969

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JAN

MONTH

ALL WEATHER  
CLASS

01  
HOURS (L.S.T.)

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	2.6	.6									3.9	5.0
NNE		.6	.6									1.3	7.0
NE		1.9	.6	.6								3.2	6.8
NNE		.6										.6	6.0
E	.6	1.3	1.9									3.9	6.0
ESE	.6		.6									1.3	6.0
SE		1.3	1.3									2.6	6.8
SSE	.6	1.9	.6									3.2	4.8
S	1.3		.6									1.9	5.0
SSW	1.3	1.3	1.3	.6								4.5	6.3
SW	1.9	.6	.6									3.2	4.6
WSW	1.9	5.2	.6									7.7	4.8
W	2.6	8.4	3.9	1.9	.6							17.4	6.5
WNW	.6	1.9	1.3	2.6								6.5	8.2
NW	2.6	3.2	8.4	3.2								17.4	7.6
NNW	.6	1.3	1.3	1.3								4.5	9.1
VAEBL													
CALA												16.8	
	15.5	32.3	24.5	10.3	.6							100.0	5.5

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

## PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JAN  
MONTH

ALL WEATHER  
CLASS

04  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	1.3	2.6									4.5	6.1
NNE	1.3											1.3	3.0
NE		.6	.6									1.3	6.5
ENE	1.3	1.9	.6									3.9	4.8
E	1.3	2.6	.6	.6								5.2	5.3
ESE	.6			.6								1.3	7.5
SE		.6	.6									1.3	6.5
SSE		.6										.6	5.0
S	1.3	1.3	.6									3.2	4.4
SSW	.6	.6	.6									1.9	5.3
SW	2.6	1.9	.6	.6								5.8	5.2
WSW	1.3	3.2	.6									5.2	5.4
W	1.9	9.0	1.9	3.2								16.1	6.7
WNW	1.3	3.9	2.6	3.9								11.6	8.4
NW	2.6	3.2	5.2	.6								11.6	6.4
NNW	.6	1.9	2.6	.6								5.8	6.6
VARBL													
CALM												19.4	
	17.4	32.9	20.0	10.3								100.0	5.1

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JAN  
MONTH

ALL WEATHER  
CLASS

07  
HOURS (L.S.T.)

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	1.3	1.3	.6								3.9	6.2
NNE	.6	.6										1.3	4.5
NE	.6											.6	2.0
ENE		2.6	1.3									3.9	6.0
E	1.3	1.9	.6									3.9	4.5
ESE	.6	2.6										3.2	4.4
SE	1.3	.6										1.9	3.3
SSE	1.9											1.9	2.7
S	1.3	1.3										2.6	3.3
SSW		1.3			.6							1.9	9.3
SW	1.3	2.6										3.9	3.7
WSW	1.3	1.9	2.6	.6								6.5	5.9
W	3.2	7.1	5.2	1.9								17.4	6.2
WNW		6.5	5.2	1.3								12.9	7.3
NW	1.9	5.2	3.2	.6								11.0	6.1
NNW	.6	1.9	1.9	.6								5.2	6.6
VARB													
CALM												18.1	
	16.8	37.4	21.3	5.8	.6							100.0	4.8

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JAN  
MONTH

ALL WEATHER  
CLASS

10  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	3.9	2.6	1.9								9.0	7.1
NNE	.6	.6										1.3	4.5
NE	.6	.6	.6									1.9	5.0
ENE		2.6										2.6	5.8
E	.6	3.2		.6								4.5	6.0
ESE	1.9	.6	.6									3.2	4.0
SE		1.3										1.3	5.5
SSE	.6	1.3										1.9	4.3
S	1.9	1.3	1.3									4.5	5.0
SSW	.6	2.6	.6									3.9	5.5
SW	.6	2.6										3.2	4.8
WSW		1.9	.6	.6								3.2	8.0
W	.6	5.8	5.2	6.5								18.1	8.8
WNW	.6	1.9	7.7	3.9								14.2	9.4
NW	.6	1.9	5.2	3.9								11.6	8.9
NNW	2.6	1.9	2.6		.6							7.7	6.4
VARIABLE													
CALM												7.7	
	12.9	34.2	27.1	17.4	.6							100.0	6.8

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JAN

MONTH

ALL WEATHER  
CLASS

13  
HOURS (L.S.T.)

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		3.2	1.9	1.3								6.5	8.1
NNE	.6	.6										1.3	3.5
NE	1.9											1.9	2.7
ENE	.6	1.3	1.3									3.2	5.8
E	2.6	3.2										5.8	4.1
ESE	.6	1.9										2.6	4.5
SE	.6	1.3	1.3									3.2	5.6
SSE		1.3	1.3									2.6	7.0
S	.6	3.9		.6								5.2	5.9
SSW		1.9	.6	1.3								3.9	8.2
SW	.6	.6										1.3	4.5
WSW	.6	1.3	2.6		.6							5.2	7.6
W	1.9	3.2	9.0	5.2	1.9							21.3	9.3
WNW		3.9	5.2	5.2								14.2	9.8
NW		2.6	7.1	2.6								12.3	9.4
NNW	.6	3.2	1.3	1.3								6.5	6.7
VARBL													
CALM												3.2	
	11.6	33.3	31.6	17.4	2.6							100.0	7.5

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

## PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

JAN  
MONTH

ALL WEATHER  
CLASS

16  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	1.9	.6									3.2	5.0
NNE	.6	1.3										1.9	4.0
NE	.6	.6										1.3	3.5
ENE	.6	.6										1.3	4.0
E	.6	3.2										3.9	4.3
ESE			1.3									1.3	6.5
SE	1.3	.6	1.3									3.2	4.8
SSE	.6	.6			.6							1.9	8.0
S	1.3	.6	1.3	1.3								4.5	7.0
SSW	.6	.6	1.3	1.9	.6							5.2	10.1
SW	.6	.6	.6	.6								2.6	6.3
WSW	.6	1.9										2.6	4.5
W	1.9	5.8	8.4	5.8								21.9	8.4
WNW	3.2	3.2	9.0	1.9								17.4	7.4
NW	.6	5.8	1.3	4.5								12.3	7.8
NNW	1.3	1.3	3.2	2.6								8.4	8.6
VARBL													
CALM												7.1	
	15.5	29.0	28.4	18.7	1.3							100.0	6.8

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEAR

JAN  
MONTH

ALL WEATHER  
CLASS

19  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.9	1.9	.6									4.5	4.3
NNE		.6	.6									1.3	6.0
NE													
ENE	.6	.6										1.3	3.5
E	3.2	1.9	1.3									6.5	4.3
ESE		.6	.6									1.3	7.0
SE		1.9	.6									2.6	5.0
SSE	.6		.6									1.3	4.5
S	1.3	1.3	.6	1.3								4.5	7.1
SSW	1.3	2.6	1.9									5.8	5.0
SW	.6	1.3	.6	.6								3.2	6.2
WSW	2.6	3.2	2.6									8.4	5.7
W	1.9	9.7	5.2	1.3								18.1	5.8
WNW	.6	3.9	3.2		.6							9.0	8.2
NW	.6	1.3	1.9	2.6								6.5	8.7
NNW	.6	2.6	2.6	1.3	.6							8.4	9.5
VARBL													
CALM												17.4	
	16.1	33.5	23.2	7.1	1.3	1.3						100.0	5.3

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

JAN  
MONTH

ALL WEATHER  
CLASS

22  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		1.9	1.3	.6								3.9	7.2
NNE		.6	.6									1.3	7.0
NE	.6	.6	.6									1.9	4.7
ENE	1.3	1.9										3.2	4.2
E		2.6										2.6	4.5
ESE	.6	1.3	.6									2.6	5.8
SE	.6	1.3										1.9	3.7
SSE	.6	.6	.6									1.9	5.3
S	1.9		1.3	.6								3.9	6.7
SSW	1.3	.6	.6									2.6	4.5
SW	.6	3.9	1.9									6.5	5.3
WSW	2.6	1.3	2.6									6.5	5.6
W	.6	6.5	4.5	2.6	.6							14.8	7.7
WNW	1.3	4.5	3.9	1.9								11.6	7.2
NW	1.3	2.6	1.9	1.9	1.3							9.0	8.9
NNW	1.3	3.2	1.3	2.6								8.4	7.4
VARBL													
CALM												17.4	
	14.8	33.5	21.9	10.3	1.9							100.0	5.5

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JAN  
MONTH

ALL WEATHER  
CLASS

ALL  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	2.3	1.5	.6								4.9	6.4
NNE	.5	.6	.2									1.4	4.9
NE	.6	.6	.3	.1								1.5	4.9
ENE	.6	1.5	.4									2.5	5.1
E	1.3	2.5	.6	.2								4.5	4.8
ESE	.6	.9	.5	.1								2.1	5.4
SE	.5	1.1	.6									2.3	5.1
SSE	.6	.8	.4		.1							1.9	5.3
S	1.4	1.2	.7	.5								3.8	5.8
SSW	.7	1.5	.9	.5	.2							3.7	6.8
SW	1.1	1.8	.6	.2								3.7	5.1
WSW	1.4	2.5	1.5	.2	.1							5.6	5.8
W	1.9	6.9	5.4	3.5	.4							18.1	7.5
WNW	1.0	3.7	4.8	2.6	.1	.1						12.2	8.2
NW	1.3	3.2	4.3	2.5	.2							11.5	7.9
NNW	1.0	2.2	2.1	1.3	.2	.1						6.9	7.7
VARBL													
CALM												13.4	
	15.1	33.3	24.8	12.2	1.1	.2						100.0	5.9

TOTAL NUMBER OF OBSERVATIONS

1240

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

FEB

MONTH

ALL WEATHER

CLASS

01

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N			2.8	1.4								4.3	9.8
NNE	.7	.7		.7								2.1	6.3
NE		2.1										2.1	5.3
ENE	.7	2.8	.7	1.4								5.7	6.8
E	.7	.7	2.1									3.5	6.2
ESE	1.4	2.1										3.5	4.0
SE	.7	1.4										2.1	4.3
SSE		.7										.7	4.0
S	.7	2.1	.7									3.5	4.6
SSW	1.4	2.1	1.4	.7								5.7	6.0
SW	1.4	1.4	2.1									5.0	5.6
WSW	.7	2.8	2.1									5.7	5.6
W	2.8	5.0	2.1		.7							10.6	6.1
WNW	1.4	6.4		2.1								9.9	6.1
NW	.7	3.5		6.4								10.6	9.5
NNW	.7	4.3	2.8									7.8	5.6
VARB													
CALM												17.0	
	14.2	38.3	17.0	12.8	.7							100.0	5.3

TOTAL NUMBER OF OBSERVATIONS

141

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

FEB  
MONTH

ALL WEATHER  
CLASS

04  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	2.8	.7	2.1	.7								6.4	5.7
NNE	.7	2.1	.7	.7								4.3	6.7
NE		2.1	1.4									3.5	6.0
ENE	.7	2.1	.7	.7								4.3	6.3
E	2.1	2.1	2.1									6.4	5.3
ESE	.7	.7	.7									2.1	6.0
SE		.7										.7	4.0
SSE													
S	.7		1.4									2.1	5.3
SSW	2.1	1.4	1.4	.7								5.7	5.5
SW		3.5	2.1									5.7	5.8
WSW	1.4	4.3	2.1									7.8	5.0
W	2.1	5.7	2.1	1.4								11.3	6.0
WNW	2.1	2.1	1.4	2.8								8.5	7.5
NW	4.3	2.1	3.5	.7								10.6	6.1
NNW		3.5	3.5	1.4								8.5	7.8
VARBL													
CALM												12.1	
	19.9	33.3	25.5	9.2								100.0	5.4

TOTAL NUMBER OF OBSERVATIONS

141

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

FEB

MONTH

ALL WEATHER

CLASS

07

HOURS (L.S.T.)

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	2.1	1.4	.7								5.0	6.3
NNE		1.4	.7									2.1	5.7
NE	.7	.7	1.4									2.8	5.8
ENE	.7	1.4	1.4									3.5	6.2
E		2.1	2.8									5.0	7.0
ESE		1.4	.7									2.1	7.0
SE													
SSE	2.1	1.4		.7								4.3	5.2
S	1.4		.7									2.1	3.7
SSW	2.1	3.5	.7									6.4	4.9
SW	3.5	.7	.7	1.4								5.7	6.5
WSW	1.4	.7	.7	.7								3.5	5.8
W	2.1	3.5	3.7		.7							12.1	6.8
WNW	1.4	6.4	3.5									11.3	5.8
NW		5.0	2.8	1.4	.7							9.9	8.3
NNW		2.8	1.4	2.1								6.4	8.4
VARBL													
CALM												17.7	
	16.3	32.6	24.8	7.1	1.4							100.0	5.3

TOTAL NUMBER OF OBSERVATIONS

141

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

FEB  
MONTH

ALL WEATHER  
CLASS

10  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.4		2.8	2.8								7.1	9.4
NNE	.7	2.1	1.4									4.3	6.0
NE	.7	1.4	.7	.7								3.5	7.0
ENE		1.4	1.4									2.8	7.0
E	1.4	.7	4.3									6.4	6.2
ESE	.7	.7	.7									2.1	5.7
SE	.7											.7	2.0
SSE	.7	.7	1.4									2.8	6.0
S		.7	.7	.7	.7							2.8	10.8
SSW	1.4	2.1	1.4									5.0	5.6
SW	.7	3.5		.7								5.0	5.9
WSW		3.5	1.4	1.4	.7							7.1	8.5
W	2.1	1.4	6.4	2.8	.7	.7						14.2	9.3
WNW	.7	2.1	7.1	3.5								13.5	9.4
NW	.7	2.8	5.7		.7							9.9	7.9
NNW	.7	2.1	1.4	4.3								8.5	9.8
VARBL													
CALM												4.3	
	12.8	25.5	36.9	17.0	2.8	.7						100.0	7.7

TOTAL NUMBER OF OBSERVATIONS

141

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

STATION 14793 WILLOW GROVE, PENNSYLVANIA 73-77 YEARS FEB MONTH 13 HOURS (L.S.T.)

ALL WEATHER  
CLASS

CONDITION

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	.7	2.8	.7								4.3	8.5
NNE	.7	1.4	1.4									3.5	6.2
NE			.7	.7								1.4	11.5
ENE		1.4		.7								2.1	6.7
E		.7	4.3	.7								5.7	8.5
ESE	.7	2.1										2.8	4.0
SE													
SSE	.7	2.1			.7							3.5	7.0
S		1.4	1.4	.7	1.4							5.0	10.7
SSW		1.4	2.1	.7								4.3	7.7
SW	.7	1.4	2.1	.7								5.0	7.1
WSW		1.4	1.4	.7								3.5	8.2
W	1.4	4.3	7.1	5.0	.7							18.4	9.0
WNW	.7	2.1	8.5	5.0	2.8							19.1	10.6
NW			2.8	2.8	.7							6.4	11.4
NNW	.7	1.4	3.5	5.0								10.6	9.9
VARBL													
CALM												4.3	
	5.7	22.0	38.3	23.4	6.4							100.0	8.7

TOTAL NUMBER OF OBSERVATIONS 141

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

FEB

MONTH

ALL WEATHER  
CLASS

16  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	≥56	%	MEAN WIND SPEED
N		2.1	2.1	.7								5.0	7.7
NNE	.7		.7	.7								2.1	7.0
NE	.7		1.4	.7								2.8	7.5
ENE			.7									.7	7.0
E		2.1	1.4	1.4								5.0	7.9
ESE		1.4	.7									2.1	6.3
SE		.7										.7	4.0
SSE		.7										.7	6.0
S	2.1	2.1	2.1	.7								7.1	6.2
SSW		1.4	5.0	2.1								8.5	9.2
SW	.7	.7	2.8									4.3	7.3
WSW	.7	.7	2.1									3.5	7.2
W	2.1	7.1	4.3	5.0								18.4	7.9
WNW		1.4	6.4	5.0	.7							13.5	10.4
NW		2.1	4.3	5.0								11.3	10.0
NNW		2.8	5.0	2.1								9.9	8.3
VARBL													
CALM												4.3	
	7.1	25.5	39.0	23.4	.7							100.0	8.0

TOTAL NUMBER OF OBSERVATIONS

141

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77  
YEARS

FEB  
MONTH

ALL WEATHER  
CLASS

19  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	.7	2.1	.7	.7							4.3	9.6
NNE	.7	1.4	.7	.7								3.5	7.0
NE	.7											.7	3.0
ENE	.7	1.4										2.1	4.7
E	.7	1.4	2.8	.7								5.7	7.4
ESE	.7	.7	1.4									2.8	6.3
SE		.7										.7	6.0
SSE	.7	.7	.7									2.1	5.3
S	2.8	3.5	1.4	2.1								9.9	6.2
SSW	2.1	2.8		.7								5.7	5.0
SW	2.1	1.4	1.4									5.0	4.3
WSW	.7	3.5										4.3	4.3
W	.7	6.5	5.7	.7								15.6	6.3
WNW	1.4	2.1	4.3	.7	.7							9.2	8.1
NW	1.4	2.1	3.5	1.4								8.5	7.9
NNW	.7	4.3	.7	2.1								7.8	7.6
VARBL													
CALM												12.1	
	16.3	35.5	24.8	9.9	1.4							100.0	5.8

TOTAL NUMBER OF OBSERVATIONS

141

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

FEB  
MONTH

ALL WEATHER  
CLASS

22  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	2.8	2.1									5.7	5.6
NNE		.7	1.4									2.1	7.7
NE		1.4		.7								2.1	7.0
ENE	.7	1.4	2.8									5.0	6.3
E		2.1	3.5									5.7	7.4
ESE													
SE	2.1	.7	.7									3.5	4.2
SSE		2.8										2.8	4.0
S	1.4	2.1										3.5	3.4
SSW	1.4	4.3	.7	.7								7.1	5.4
SW	3.5	2.8	.7									7.1	4.3
WSW	.7	2.8	1.4									5.0	5.0
W	1.4	7.1	.7		1.4							10.6	6.5
WNW	2.1	4.3	5.0	.7								12.1	6.2
NW	2.1	2.8	.7	2.1	.7							8.5	7.6
NNW		1.4	2.1	2.1								5.7	10.1
VARBL													
CALM												13.5	
	16.3	39.7	22.0	6.4	2.1							100.0	5.3

TOTAL NUMBER OF OBSERVATIONS

141

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

FEB  
MONTH

ALL WEATHER  
CLASS

ALL  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	1.2	2.3	1.0	.1							5.2	7.7
NNE	.5	1.2	.9	.4								3.0	6.5
NE	.4	1.0	.7	.4								2.4	6.7
ENE	.4	1.5	1.0	.4								3.3	6.4
E	.6	1.5	2.9	.4								5.4	7.0
ESE	.5	1.2	.5									2.2	5.4
SE	.4	.5	.1									1.1	4.2
SSE	.5	1.2	.3	.1	.1							2.1	5.5
S	1.2	1.5	1.1	.5	.3							4.5	6.5
SSW	1.3	2.4	1.6	.7								6.0	6.3
SW	1.6	1.9	1.5	.4								5.3	5.8
WSW	.7	2.5	1.4	.4	.1							5.1	6.2
W	1.9	5.3	4.3	1.9	.5	.1						13.9	7.4
WNW	1.2	3.4	4.5	2.5	.5							12.1	8.3
NW	1.2	2.6	2.9	2.5	.4							9.5	8.5
NNW	.4	2.8	2.6	2.4								8.2	8.5
VARBL													
CALM												10.6	
	13.6	31.6	28.5	13.7	2.0	.1						100.0	6.5

TOTAL NUMBER OF OBSERVATIONS

1128

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

MAR  
MONTH

ALL WEATHER  
CLASS

01  
MOVES (L.S.T.)

CONDITION

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	1.9	1.3	1.9								5.8	7.9
NNE	.6		.6	.6								1.9	7.3
NE	.6	.6	.6									1.9	6.3
ENE	.6	1.3	3.9									5.8	7.2
E	1.9	1.9	3.9									7.7	5.8
ESE		1.3	1.3									2.6	7.5
SE	1.9	1.3	1.9									5.2	5.3
SSE		1.9	.6									2.6	5.8
S	.6	1.9										2.6	4.8
SSW	.6	1.9	1.3	.6								4.5	7.4
SW	.6	2.6	1.3									4.5	5.4
WSW		1.3	.6									1.9	7.0
W	1.3	2.6	1.9		.6							6.5	7.3
WNW	.6	1.9	1.3	5.2	.6							9.7	10.9
NW	1.3	3.2	1.3	3.2		.6						9.7	9.1
NNW	1.3	.6	3.9	3.9								9.7	9.4
VARBL												17.4	
CALM												100.0	6.4
	12.9	26.5	25.8	15.5	1.3	.6							

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77  
YEARS

MAR  
MONTH

ALL WEATHER  
CLASS

04  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	2.6	1.3	.6								5.2	6.4
NNE	1.3											1.3	2.5
NE	.6	2.6	2.6	.6								6.5	6.8
ENE		2.6	1.9									4.5	7.0
E	1.3	4.5	3.9									9.7	5.8
ESE	.6	1.9	3.2	.6								6.5	6.9
SE	.6		1.3									1.9	6.3
SSE	.6	1.9										2.6	4.0
S	.6		.6									1.3	6.0
SSW		.6	1.3									1.9	7.0
SW	1.9	2.6	1.3	1.3								7.1	6.6
WSW	1.9	2.6	.6									5.2	4.3
W	.6	1.9	2.6	1.9								7.1	8.6
WNW	1.3	1.9	2.6	1.9								7.7	7.5
NW	.6	3.2	3.9	3.9	.6	.6						12.9	10.0
NNW		3.2	.6	1.9	.6							6.5	9.5
VARB													
CALM												12.3	
	12.9	32.3	27.7	12.9	1.3	.6						100.0	6.3

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

MAR  
MONTH

ALL WEATHER  
CLASS

07  
HOURS (L.S.T.)

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	1.3	1.9	1.3								5.2	7.9
NNE		1.3	1.3									2.6	7.3
NE	1.3	.6	1.3	1.3								4.5	7.6
ENE	.6	3.9										4.5	4.9
E	1.9	3.9	6.5	.6								12.9	7.0
ESE	.6	1.3	1.9	.6								4.5	7.6
SE	.6	1.9	.6	.6								3.9	5.8
SSE	.6	1.9										2.6	4.0
S	.6	1.3		.6								2.6	6.3
SSW	1.3	.6		.6								2.6	5.5
SW	1.3	1.9	.6	.6								4.5	7.0
WSW	.6	1.3		.6								2.6	5.5
W	1.3	2.6	3.9	1.3								9.0	7.2
WNW	1.3	5.2	5.2	.6								12.3	6.7
NW	1.3	1.9	3.9	1.9		.6						9.7	8.9
NNW		1.3	1.3	1.3								3.9	8.3
VARBL													
CALM												12.3	
	14.2	32.3	28.4	11.6	.6	.6						100.0	6.1

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

MAR  
MONTH

ALL WEATHER

CLASS

10

HOURS (L.S.T.)

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	.6		1.9	.6							4.5	9.3
NNE		1.9	1.9	.6								4.5	8.9
NE	.6		1.3		.6							2.6	9.0
ENE		1.3	1.3	.6								3.2	7.4
E		2.6	5.8	2.6								11.0	8.8
ESE		2.6	5.2	.6								8.4	8.0
SE		1.3	1.3									2.6	6.3
SSE		1.9	3.2									5.2	7.3
S		1.3		.6								1.9	8.7
SSW	.6	1.3	1.3									3.2	5.6
SW	1.3	2.6	.6	1.9								6.5	7.7
WSW	.6	1.9	1.3	.6								4.5	6.6
W		1.9	5.8	1.9	1.3							11.0	10.2
WNW	.6		2.6	3.2	1.3	.6						8.4	13.5
NW		.6	3.9	3.9	2.6							11.0	12.6
NNW	.6	1.9	1.9	3.2	1.3							9.0	10.2
VARBL													
CALM												2.6	
	5.8	23.9	37.4	21.9	7.7	.6						100.0	9.2

TOTAL NUMBER OF OBSERVATIONS

155

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

STATION NAME  
PILLOW GROVE, PENNSYLVANIA

YEARS  
73-77

MONTH  
MAR

CLASS  
ALL WEATHER

HOURS (L.S.T.)  
13

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		.6				.6						1.3	14.0
NNE				.6								.6	15.0
NE		.6	.6	1.9								3.2	10.2
ENE		.6	1.3	.6								2.6	8.3
E		2.6	3.2	1.9	.6							8.4	9.0
ESE		1.3	3.9	1.3								6.5	8.5
SE		2.6	4.5	.6								7.7	8.0
SSE	.6	.6	.6									1.9	4.7
S		2.6	1.9									4.5	6.7
SSW		2.6	2.6	1.9								7.1	8.8
SW		.6	1.9	.6								3.2	8.2
WSW			2.6	.6	.6							3.9	11.0
W	.6	3.2	5.2	4.5		.6						14.2	10.0
WNW		.6	4.5	5.2		1.3						11.6	12.5
NW	.6	1.9	5.2	3.2	3.2							14.2	11.3
NNW		.6	1.9	2.6	1.3	.6						7.1	13.2
VARBL													
CALM												1.9	
	1.9	21.3	40.0	25.8	5.8	3.2						100.0	9.9

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

MAR  
MONTH

ALL WEATHER  
CLASS

16  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		.6		.6								1.3	6.0
NNE	1.3		.6	.6								2.6	7.0
NE	.6	.6										1.3	3.0
ENE		.6	1.3	.6	.6							3.2	10.4
E		1.3	3.2	.6								5.2	8.0
ESE		1.3	5.2	1.9								8.4	6.3
SE	.6	1.3	.6	1.3								3.9	7.5
SSE	.6		1.9									2.6	6.3
S		2.6	.6	1.3								4.5	8.0
SSW		3.2	4.5									7.7	7.7
SW	.6	.6	.6	1.3								3.2	9.6
WSW		1.9	1.9	.6								4.5	6.4
W	.6	1.3	4.5	4.5		.6						11.6	10.2
WNW		1.3	5.8	3.9	2.6	.6	.6					14.8	12.7
NW	.6	1.3	5.8	4.5	2.6							14.8	11.5
NNW	.6		1.9	2.6	1.9	.6						7.7	13.8
VARBL													
CALM												2.6	
	5.8	18.1	38.7	24.5	7.7	1.9	.6					100.0	9.7

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

MAR  
MONTH

ALL WEATHER  
CLASS

19  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		1.3	2.6									3.9	7.7
NNE	.6	.6		.6								1.9	7.3
NE	.6		.6									1.3	6.0
ENE				1.3								1.3	13.0
E	1.3	1.9	4.5									7.7	6.5
ESE		3.2	3.9									7.1	6.9
SE		.6	1.3									1.9	7.7
SSE	.6	.6	1.3	.6								3.2	7.2
S		1.9	1.9	.6								4.5	6.9
SSW	1.3	3.9	2.6	.6								8.4	5.8
SW	1.3	2.6	1.3									5.2	5.3
WSW	1.9	.6										2.6	2.5
W	1.3	5.2	1.3	.6								8.4	5.8
WNW	1.9	4.5	1.3	3.2	1.9	.6						13.5	9.6
NW	.6	.6	1.9	4.5								7.7	11.1
NNW	1.3	1.9	1.9	3.2								8.4	9.1
VARBL													
CALM												12.9	
	12.9	29.7	26.5	15.5	1.9	.6						100.0	6.6

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

MAR  
MONTH

ALL WEATHER  
CLASS

22  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		1.3	3.2	1.3								5.8	8.7
NNE						.6						.6	22.0
NE	.6	.6	.6	.6								2.6	8.0
ENE	.6	.6	.6	.6								2.6	7.0
E	.6	1.9	1.9	.6								5.2	6.0
ESE	.6	3.2	3.9									7.7	6.3
SE	.6	1.3	4.5									6.5	7.4
SSE		2.6	1.9									4.5	6.4
S	1.3	5.2	.6	.6								7.7	5.2
SSW	.6	.6	.6	.6	.6							3.2	9.0
SW		5.2	.6	.6								5.8	6.2
WSW	.6	.6	.6									1.9	6.0
W	.6	4.5	1.3	.6	.6							7.7	6.3
WNW	.6	2.6	3.9	3.2	1.3							11.6	10.1
NW	1.3	.6	2.6	3.2		.6						8.4	10.4
NNW	1.3	1.9	3.9	3.2								10.3	8.4
VARBL													
CALM												7.7	
	9.7	32.9	30.3	15.5	2.6	1.3						100.0	7.2

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77  
YEARS

MAR  
MONTH

ALL WEATHER  
CLASS

ALL  
MOORE (L.S.T.)

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.4	1.3	1.3	1.0	.1	.1						4.1	8.2
NNE	.5	.5	.6	.4		.1						2.0	8.2
NE	.6	.7	1.0	.6	.1							3.0	7.5
ENE	.2	1.4	1.3	.5	.1							3.5	7.5
E	.9	2.6	4.1	.8	.1							8.5	7.2
ESE	.2	2.0	3.5	.6								6.5	7.5
SE	.6	1.3	2.0	.3								4.2	6.9
SSE	.4	1.5	1.2	.1								3.1	6.0
S	.4	2.1	.7	.5								3.7	6.4
SSW	.6	1.9	1.8	.6	.1							4.8	7.2
SW	.9	2.3	1.0	.7	.1							5.0	6.8
WSW	.7	1.3	1.0	.3	.1							3.4	6.6
W	.8	2.9	3.3	1.9	.3	.2						9.4	8.5
WNW	.8	2.3	3.4	3.3	1.0	.4	.1					11.2	10.5
NW	.8	1.7	3.5	3.5	1.1	.3						11.0	10.7
NNW	.6	1.5	2.2	2.7	.6	.2						7.8	10.2
VARBL													
CALM												8.7	
	9.5	27.1	31.9	17.9	3.6	1.2	.1					100.0	7.7

TOTAL NUMBER OF OBSERVATIONS

1240

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

STATION 14793 WILLOW GROVE, PENNSYLVANIA STATION NAME YEARS 73-77 MONTH APR

ALL WEATHER CLASS HOURS (L.S.T.) 01

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	3.3	6.0									10.0	6.7
NNE	1.3	1.3	1.3									4.0	5.2
NE		.7	.7									1.3	7.5
ENE			.7									.7	7.0
E		4.7	1.3	.7								6.7	6.2
ESE		.7	.7									1.3	6.5
SE	.7	1.3	.7	.7								3.3	6.4
SSE													
S	1.3	.7	1.3									3.3	5.4
SSW	1.3	3.3	.7	1.3								6.7	6.3
SW	2.0	1.3	3.3									6.7	5.5
WSW	2.7	2.0	.7									5.3	4.4
W	.7	4.7	3.3	1.3	.7							10.7	7.6
WNW	3.3	2.0	2.0	1.3	.7							9.3	6.9
NW	.7	4.0	2.7	2.0			.7					10.0	9.3
NNW	.7	2.0	1.3	.7	1.3							6.0	9.2
VARBL													
CALM												14.7	
	15.3	32.0	26.7	8.0	2.7		.7					100.0	5.9

TOTAL NUMBER OF OBSERVATIONS 150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

APR  
MONTH

ALL WEATHER  
CLASS

04  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		2.7	.7	1.3								4.7	7.4
NNE	.7	.7	1.3									2.7	6.3
NE		2.7	.7	.7								4.0	6.8
ENE		.7	.7									1.3	7.0
E	1.3	2.0	2.0									5.3	5.1
ESE	.7	.7	2.0	.7								4.0	7.8
SE		.7										.7	5.0
SSE		.7		.7								1.3	7.3
S		.7	1.3									2.0	7.7
SSW	1.3	2.7	2.7	.7								7.3	5.8
SW	2.7	2.7										5.3	3.6
WSW	1.3	2.0	4.0	.7								8.0	6.9
W	3.3	10.0	2.0	.7								16.0	5.0
WNW	2.0		2.7	.7								5.3	7.1
NW	.7	4.0	2.7	1.3	.7	.7						9.3	8.4
NNW	.7	3.3	2.7	.7								8.0	8.1
VARBL													
CALM												14.7	
	14.7	36.0	25.3	8.0	.7	.7						100.0	5.5

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77  
YEARS

APR  
MONTH

ALL WEATHER  
CLASS

07  
HOURS (L.S.T.)

CONDITION

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	3.3	.7									4.7	4.4
NNE	.7	1.3	1.3	.7								4.0	7.7
NE			.7									.7	8.0
ENE		.7	1.3									2.0	7.7
E	2.7	2.0	4.0									8.7	5.8
ESE		.7	1.3									2.0	7.7
SE	.7	.7										1.3	4.5
SSE		.7										.7	5.0
S	.7	.7		.7								2.0	7.7
SSW		2.0	.7	.7								3.3	7.2
SW	.7	.7	3.3									4.7	7.1
WSW	2.7	4.0	.7	.7								8.0	4.8
W	3.3	6.7	4.0	1.3								15.3	6.2
WNW	1.3	2.0	3.3	1.3								8.0	7.1
NW	2.7	4.0	5.3	4.7	.7							17.3	8.2
NNW	.7	2.7	.7	2.0	.7							6.7	8.6
VARBL													
CALM												10.7	
	16.7	32.0	27.3	12.0	1.3							100.0	6.1

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

APR  
MONTH

ALL WEATHER  
CLASS

10  
HOURS (L.S.T.)

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	1.3	2.7	2.0								6.7	8.3
NNE	.7	1.3	.7	2.0								4.7	8.4
NE		1.3	.7									2.0	6.3
ENE	.7	2.0	.7	1.3								4.7	7.6
E		4.0	2.0	.7								6.7	6.9
ESE	.7	1.3	1.3									3.3	6.0
SE		.7		.7								1.3	9.0
SSE		.7	1.3									2.0	6.3
S	1.3		.7	.7								2.7	6.8
SSW		.7	.7	.7								2.0	10.7
SW		.7	3.3	1.3								5.3	9.3
WSW		2.7	1.3									4.0	6.7
W	.7	4.0	6.7	3.3	.7							15.3	8.8
WNW		.7	6.7	2.0	.7	.7						10.7	10.8
NW	.7	2.7	4.0	7.3		1.3						16.0	11.1
NNW		2.0	2.7	4.7		.7						10.0	11.3
VARBL													
CALM												2.7	
	5.3	26.0	35.3	26.7	1.3	2.7						100.0	8.9

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

APR  
MONTH

ALL WEATHER  
CLASS

13  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		1.3		2.0								3.3	9.4
NNE				.7								.7	11.0
NE	.7		1.3	.7								2.7	8.8
ENE	1.3		2.7									4.0	6.5
E		.7	.7	.7								2.0	8.0
ESE		1.3	.7	.7								2.7	7.8
SE		.7	1.3	.7								2.7	8.3
SSE	.7	.7	2.7									4.0	7.3
S		.7	1.3	1.3								3.3	9.4
SSW		.7	2.7									3.3	7.8
SW		2.0	1.3	1.3								4.7	8.0
WSW	.7	.7	2.7	.7								4.7	8.6
W		2.0	4.7	1.3	1.3							9.3	10.0
WNW	.7	4.0	9.3	5.3	.7							20.0	9.3
NW	.7	2.0	2.0	7.3	.7	.7						13.3	11.5
NNW	.7	1.3	4.0	6.7	2.0							16.7	11.6
VARBL													
CALM												2.7	
	5.3	18.0	37.3	31.3	4.7	.7						100.0	9.4

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

APR

MOUTH

ALL WEATHER

CLASS

16

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	.7	2.0	3.3								7.3	9.8
NNE			2.0									2.0	9.3
NE			.7									.7	8.0
ENE			.7	1.3								2.0	11.0
E		1.3	2.7	.7								4.7	8.1
ESE			2.0									2.0	7.7
SE			1.3									1.3	10.0
SSE	.7	.7	1.3	1.3								4.0	7.8
S		1.3	1.3									2.7	6.5
SSW	.7	2.0	2.0	1.3	.7							6.7	8.5
SW	.7	2.0	1.3	2.0								6.0	8.3
WSW		2.7	4.7	1.3								8.7	7.7
W		2.7	5.3	3.3								11.3	9.1
WRW	.7	.7	4.7	4.7	.7	.7						12.0	11.2
NW		1.3	3.3	5.3	.7	.7						11.3	11.9
NNW		1.3	4.7	6.7	.7	.7						14.0	12.4
VARBL													
CALM												3.3	
	4.0	16.7	40.0	31.3	2.7	2.0						100.0	9.5

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793

WILLOW GROVE, PENNSYLVANIA

73-77

YEAR

APR

MONTH

ALL WEATHER

CLASS

19

HOURS (L.S.T.)

CONDITION

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		2.0	3.3	2.0								7.3	8.6
NNE		2.7	.7									3.3	6.0
NE		.7	.7									1.3	6.0
ENE		.7										.7	4.0
E		1.3	2.7									4.0	7.5
ESE	.7		2.0									2.7	6.8
SE		2.0	2.0	1.3								5.3	7.8
SSE		1.3	.7	.7								2.0	9.0
S	.7	3.3	.7									4.7	4.9
SSW	.7	2.0	4.7	1.3								8.7	8.0
SW	1.3	4.7	2.0									8.0	4.8
WSW	2.0	3.3	.7									6.7	5.5
W	3.3	3.3	2.7	1.3								10.7	5.7
WNW	1.3	2.7	1.3	.7	.7	.7						7.3	9.4
NW	1.3	6.0	3.3	2.7	.7							14.0	7.7
NNW	.7	1.3	1.3	3.3								6.7	10.0
VARBL													
CALM												6.7	
	12.0	36.0	29.3	14.0	1.3	.7						100.0	6.7

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

APR  
MONTH

22  
HOURS (L.S.T.)

ALL WEATHER  
CLASS

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	2.0	1.3	3.3								7.3	8.5
NNE	2.0	2.7										4.7	4.3
NE	.7											.7	1.0
ENE		1.3	.7	.7								2.7	7.5
E	.7	1.3	2.7	1.3								6.0	7.9
ESE		1.3	.7									2.0	5.7
SE	.7	2.7										3.3	4.8
SSE	.7	2.7	.7									4.0	5.3
S	.7	.7		.7								2.0	7.3
SSW	1.3	4.7	2.7	1.3								10.0	6.8
SW	2.0	4.0	3.3	.7								10.0	6.1
WSW	2.7	5.3	2.7									10.7	4.9
W	.7	2.7	1.3	.7								5.3	6.3
WNW	.7	2.0	4.0	.7		.7						8.0	8.8
NW	.7	4.0	2.0	1.3	.7							8.7	8.1
NNW	.7	4.7	2.0	2.0	.7							10.0	7.9
VARBL													
CALM												4.7	
	14.7	42.0	24.0	12.7	1.3	.7						100.0	6.5

TOTAL NUMBER OF OBSERVATIONS

150

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77  
YEARS

APR  
MONTH

ALL WEATHER  
CLASS

ALL  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.5	2.1	2.1	1.7								6.4	8.0
NNE	.7	1.2	.9	.4								3.2	6.7
NE	.2	.7	.7	.2								1.7	7.0
ENE	.2	.7	.9	.4								2.2	7.5
E	.6	2.2	2.2	.5								5.5	6.7
ESE	.2	.7	1.3	.2								2.5	7.0
SE	.2	1.1	.7	.4								2.4	7.0
SSE	.2	.7	.9	.3								2.2	7.0
S	.6	1.0	.8	.4								2.8	6.7
SSW	.7	2.2	2.1	.9	.1							6.0	7.3
SW	1.2	2.2	2.2	.7								6.3	6.4
WSW	1.5	2.8	2.2	.5								7.0	6.0
W	1.5	4.5	3.7	1.7	.3							11.7	7.2
WNW	1.2	1.7	4.2	2.1	.4	.3						10.1	9.1
NW	.9	3.5	3.2	4.0	.4	.4	.1					12.5	9.6
NNW	.5	2.3	2.4	3.6	.7	.2						9.7	10.3
VARBL												7.5	
CALM													
	11.0	29.8	30.7	18.0	2.0	.9	.1					100.0	7.3

TOTAL NUMBER OF OBSERVATIONS

1200

AD-A063 832 NAVAL WEATHER SERVICE DETACHMENT ASHEVILLE N C F/6 4/2  
SUMMARY OF METEOROLOGICAL OBSERVATIONS, SURFACE (SMOS) WILLOW 6--ETC(U)  
JUL 78

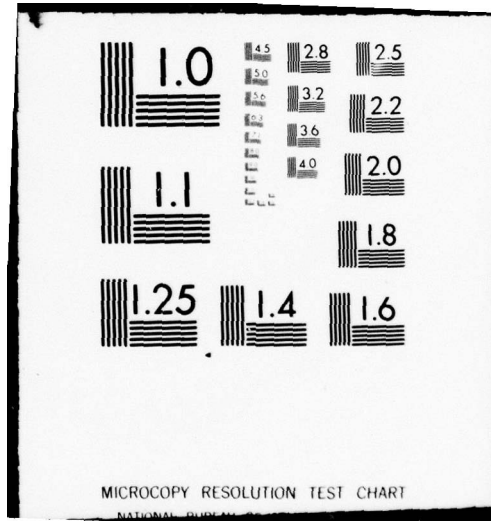
AD-A063 832 NAVAL WEATHER SERVICE DETACHMENT ASHEVILLE N C

AD-A063 832 NAVAL WEATHER SERVICE DETACHMENT ASHEVILLE N C F/6 4/2  
SUMMARY OF METEOROLOGICAL OBSERVATIONS, SURFACE (SMOS) WILLOW 6--ETC(U)  
JUL 78

NL

AD  
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NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

MAY

MONTH

ALL WEATHER

CLASS

01

HOURS (L.S.T.)

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	3.9	.6									5.8	4.4
NNE	1.3	3.2										4.5	3.6
NE	.6											.6	2.0
ENE			.6									.6	7.0
E	1.3	2.6	.6	.6								5.2	5.6
ESE	1.9	.6										2.6	3.5
SE		2.6	1.3									3.9	6.3
SSE	1.3	.6										1.9	3.0
S	2.6	3.9	1.9									8.4	5.0
SSW	3.9	3.2	.6									7.7	3.9
SW	5.2	3.2	.6	.6								9.7	4.2
WSW	.6	1.3	.6									2.6	5.3
W	4.5	2.6	2.6									9.7	4.7
WNW	1.9	3.2	3.2									8.4	5.4
NW	.6	2.6	1.3	.6								5.2	6.1
NNW	.6	.6		.6								1.9	6.3
VARBL													
CALM												21.3	
	27.7	34.2	14.2	2.6								100.0	3.8

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

MAY  
MONTH

ALL WEATHER  
CLASS

04  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	3.2	2.6		.6								6.5	4.1
NNE	1.9	.6										2.6	3.8
NE		1.9										1.9	5.0
ENE		3.2	.6	.6								4.5	5.6
E	.6	3.2	1.9									5.8	5.6
ESE		1.3	.6									1.9	5.7
SE	.6	.6										1.3	4.0
SSE	1.9	1.9										3.9	3.5
S	.6	1.3	1.3									3.2	6.0
SSW	1.3	4.5	1.3									7.1	4.5
SW		1.9	.6	.6								3.2	6.4
WSW	1.3	2.6	.6									4.5	4.9
W	4.5	5.8	1.3	.6								12.3	4.7
WNW	1.3	3.2	1.3									5.8	4.8
NW		2.6	1.3	1.3								5.2	7.9
NNW	2.0	1.9	.6	1.3								6.5	5.5
VARBL													
CALM												23.9	
	20.0	39.4	11.6	5.2								100.0	3.9

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

MAY  
MONTH

ALL WEATHER  
CLASS

07  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.9	1.9	1.3									5.2	5.1
NNE	2.6	1.3	1.3									5.2	4.6
NE		3.2	.6									3.9	5.2
ENE	.6	1.9	1.3									3.9	5.7
E	.6	1.9	2.6				.6					5.8	8.8
ESE	1.3	2.6	1.3									5.2	5.0
SE		1.3										1.3	5.5
SSE	1.3	3.2										4.5	4.7
S	1.3	.6	1.9									3.9	5.8
SSW	.6	3.2	2.6									6.5	6.5
SW		.6	.6									1.3	7.0
WSW		3.2	1.3	.6								5.2	6.0
W	3.2	5.8	3.9									12.9	5.2
WNW		4.5	1.9	.6								7.1	7.3
NW		4.5	1.9	2.6								9.0	7.9
NNW		3.2	.6	1.3								5.2	7.4
VARBL													
CALM												14.2	
	13.5	43.2	23.2	5.2			.6					100.0	5.3

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

MAY  
MONTH

ALL WEATHER  
CLASS

10  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	.6	2.6									4.5	6.7
NNE	1.3	.6	1.3									3.2	5.2
NE	.6	1.3	.6									2.6	4.8
ENE		2.6	1.3	.6								4.5	6.7
E	1.3	2.6	3.2									7.1	6.4
ESE	.6	1.9	3.2									5.8	7.0
SE		1.3										1.3	5.5
SSE		3.2	.6	.6								4.5	6.7
S		1.3	3.2	1.3								5.8	8.3
SSW		1.9	3.2									5.2	7.3
SW		2.6	2.6									5.2	6.8
WSW	1.3	.6	3.9	.6								6.5	7.0
W	.6	7.7	5.8									14.2	6.5
WNW	1.3	3.9	1.9	1.9			.6					9.7	8.4
NW	.6	.6	7.7	3.2								12.3	9.2
NNW	.6		.6	1.3								2.6	9.5
VARBL													
CALM												5.2	
	9.7	32.9	41.9	9.7			.6					100.0	6.9

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

16793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

MAY  
MONTH

ALL WEATHER  
CLASS

13  
DAYS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNOTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	1.9	1.9	1.3								6.3	7.6
NNE			.6									.6	8.0
NE		1.9										1.9	5.0
NNE			1.9									1.9	8.3
E	1.3	2.6	2.6	.6								7.1	6.4
ESE		.6	3.2									3.9	7.5
SE		.6	1.9	.6								3.2	9.0
SSE	1.3	.6	.6	.6								3.2	5.8
S	.6	2.6	4.5	.6								8.4	7.3
SSW	1.3	.6	2.6	.6								5.2	7.1
SW	.6	1.3	3.2	.6								5.8	7.8
WSW		3.9	3.2									7.1	6.6
W	1.3	3.2	7.7	1.3								13.5	7.7
WNW		1.9	4.5	1.9								8.4	8.7
NW	.6		3.9	2.6	.6							7.7	10.9
NNW		1.3	3.2	1.3	1.3							7.1	10.5
VARBL													
CALM												8.4	
	8.4	23.2	45.8	12.3	1.9							100.0	7.3

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

MAY  
MONTH

ALL WEATHER  
CLASS

16  
HOURS (L.S.T.)

CONDITION

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		1.3	.6	1.3	.6							3.9	11.2
NNE		.6										.6	5.0
NE		.6	1.3									1.9	7.3
ENE		.6	1.3	.6								2.6	8.5
E	.6	1.3	2.6									4.5	6.1
ESE			3.2	.6								3.9	8.8
SE		.6	1.3									1.9	6.7
SSE	.6	.6	3.2	.6								5.2	7.6
S	.6	4.5	2.6	.6								8.4	6.3
SSW	.6	3.9	1.9	1.3								7.7	7.3
SW		2.6	5.2	.6								8.4	7.5
WSW	.6	1.3	4.5	1.3								7.7	8.8
W	1.3	6.5	3.2	.6								11.6	6.1
WNW	1.3	1.9	3.9	2.6								9.7	8.1
NW		2.6	4.5	5.8	.6							12.9	10.0
NNW		1.3	1.9									3.9	9.2
VARBL													
CALM												5.2	
	5.8	30.3	41.3	16.1	1.3							100.0	7.5

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

MAY  
MONTH

ALL WEATHER  
CLASS

19  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNOTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		1.3	.6	.6								2.6	8.3
NNE	1.3	1.9										3.2	4.6
NE			1.3									1.3	8.5
ENE													
E	1.3	1.3	1.3									3.9	4.5
ESE	1.9	3.2	.6	.6								6.5	5.7
SE	.6	.6	1.9									3.2	6.2
SSE	1.9	.6	3.2									5.8	5.8
S	.6	3.2	2.6	.6								7.1	7.2
SSW	1.9	3.2	5.8									11.0	6.2
SW	2.6	2.6	1.3	.6								7.1	5.6
WSW	1.3	1.9	4.5	.6								8.4	7.2
W	1.9	3.9		.6								6.5	4.3
WNW	1.9	3.2	1.3		.6							7.1	5.5
NW	2.6	1.3	3.9									7.7	5.7
NNW		3.2	3.2	1.3								7.7	7.3
VARBL													
CALM												11.0	
	20.0	31.6	31.6	5.2	.6							100.0	5.4

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

MAY  
MONTH

ALL WEATHER  
CLASS

22  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	3.2	2.6	1.9								9.0	7.4
NNE	.6	.6	2.6									3.9	7.0
NE	.6											.6	3.0
ENE	.6											.6	2.0
E	1.3	1.3	.6									3.2	4.4
ESE	1.9	2.6										4.5	4.0
SE	.6	2.6	2.6									5.8	5.8
SSE		3.9	1.3									5.2	6.0
S	.6	3.9	3.2	.6								8.4	6.2
SSW	5.2	5.2	1.9	.6								12.9	4.9
SW	2.6	5.2	2.6									10.3	4.9
WSW	2.6		2.6									5.2	5.5
W	.6	5.2	2.6	1.3								9.7	6.3
WNW	1.9	2.6										4.5	4.1
NW	.6	.6	1.3									2.6	6.0
NNW		1.9				.6						2.6	10.0
VARBL													
CALM												11.0	
	21.3	38.7	23.9	4.5		.6						100.0	5.1

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

MAY  
MONTH

ALL WEATHER  
CLASS

ALL  
MOVES (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	2.1	1.3	.7	.1							5.5	6.6
NNE	1.1	1.1	.7									3.0	4.9
NE	.2	1.1	.5									1.9	5.4
ENE	.2	1.0	.9	.2								2.3	6.5
E	1.0	2.1	1.9	.2			.1					5.3	6.2
ESE	1.0	1.6	1.5	.2								4.3	6.0
SE	.2	1.3	1.1	.1								2.7	6.4
SSE	1.0	1.9	1.1	.2								4.3	5.7
S	.9	2.7	2.7	.5								6.7	6.5
SSW	1.9	3.2	2.5	.3								7.9	5.8
SW	1.4	2.5	2.1	.4								6.4	6.0
WSW	1.0	1.9	2.7	.4								5.9	6.7
W	2.3	5.1	3.4	.6								11.3	5.8
WNW	1.2	3.1	2.3	.9	.1		.1					7.6	6.9
NW	.6	1.9	3.2	2.0	.1							7.8	8.5
NNW	.5	1.7	1.3	.9	.2	.1						4.7	8.1
VARBL													
CALM												12.5	
	15.8	34.2	29.2	7.6	.5	.1	.2					100.0	5.6

TOTAL NUMBER OF OBSERVATIONS

1240

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUN  
MONTH

ALL WEATHER

CLASS

01  
HOURS (L.S.T.)

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	2.0										2.7	3.8
NNE		1.3										1.3	5.0
NIE		.7										.7	5.0
ENE	.7	1.3	1.3									3.3	5.6
E		1.3										1.3	5.5
ESE	2.0	2.0	.7									4.7	4.1
SE	.7	2.7										3.3	4.8
SSE	4.7	2.0	.7									7.3	3.5
S		3.3	3.3	.7								7.3	6.5
SSW	4.0	3.3	2.0									9.3	4.3
SW	3.3	2.0	2.0									7.3	5.0
WSW	2.0	5.3										7.3	3.9
W	3.3	6.7	1.3									11.3	4.4
WNW	2.0	3.3	1.3									6.7	4.7
NW	.7	.7		.7								2.0	7.3
NNW	.7	3.3	.7									4.7	5.4
VARBL													
CALM												19.3	
	24.7	41.3	13.3	1.3								100.0	3.8

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUN  
MONTH

ALL WEATHER  
CLASS

04  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	2.0	1.3		1.3								4.7	5.7
NNE	1.3	2.0										3.3	3.6
NE	.7	2.0	1.3									4.0	5.3
ENE	.7	.7	1.3									2.7	6.8
E	2.0	.7										2.7	2.8
ESE	.7	1.3	.7									2.7	5.5
SE													
SSE	2.0	5.3										7.3	4.1
S	1.3	2.0	1.3	.7								5.3	5.5
SSW	1.3	4.0	1.3	.7								7.3	5.4
SW	.7	3.3										4.0	4.5
WSW	.7	4.7	.7									6.0	4.6
W	4.7	7.3	.7									12.7	4.2
WNW	2.7	6.7	.7									10.0	4.3
NW		2.0										2.0	5.0
NNW	1.3	2.0	.7									4.0	5.0
VARBL													
CALM												21.3	
	22.0	45.3	8.7	2.7								100.0	3.7

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

JUN  
MONTH

ALL WEATHER  
CLASS

07  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	.7	1.3	1.3								4.7	8.0
NNE		1.3										1.3	4.5
NE	2.7	1.3	2.7									6.7	5.7
ENE	1.3	.7	1.3									3.3	4.6
E	2.7	1.3	1.3									5.3	4.3
ESE		4.0										4.0	5.0
SE	1.3	.7	.7									2.7	4.5
SSE	1.3	2.7		.7								4.7	5.9
S	2.0	2.7	1.3									6.0	4.9
SSW	1.3	2.0	.7									4.0	4.5
SW	1.3	2.0	1.3									4.7	5.1
WSW		6.7	.7									7.3	5.3
W	3.3	6.0	2.0									11.3	4.8
WNW	2.0	6.7	2.0	.7								11.3	5.5
NW	2.0	2.0	.7									4.7	4.0
NNW	2.0	1.3	2.0	.7								6.0	5.8
VARBL													
CALM												12.0	
	24.7	42.0	18.0	3.3								100.0	4.6

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUN  
MONTH

ALL WEATHER  
CLASS

10  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	1.3	1.3	.7								4.0	7.0
NNE	.7	2.0	.7									3.3	5.2
NE		1.3		1.3								2.7	8.3
ENE	.7	2.0	4.7									7.3	6.9
E	.7	4.7	.7									6.0	4.9
ESE	.7	2.7	.7									4.0	5.2
SE		2.0	1.3									3.3	6.6
SSE	.7	2.7										3.3	4.6
S		3.3	3.3									6.7	7.0
SSW	.7	4.0	2.7	.7								8.0	6.3
SW		2.0	2.7									4.7	6.9
WSW	.7	2.7	1.3									4.7	5.6
W	1.3	5.3	2.0	2.0								10.7	6.4
WNW	.7	5.3	4.7									10.7	5.9
NW	1.3	4.0	2.0	1.3								8.7	6.9
NNW		1.3	1.3	2.7								5.3	10.5
VARBL													
CALM												6.7	
	8.7	46.7	29.3	8.7								100.0	6.1

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUN  
MONTH

ALL WEATHER  
CLASS

13  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	≥56	%	MEAN WIND SPEED
N	.7	.7	1.3	.7								3.3	8.6
NNE		.7	.7									1.3	5.5
NE		.7	.7									1.3	6.5
NNE	2.0	1.3	5.3									8.7	6.6
E	.7	2.7	2.0									4.7	7.4
ESE			2.0									2.7	7.0
SE		1.3	1.3									2.7	6.5
SSE	.7	1.3	1.3									3.3	5.8
S	.7	4.7	3.3	2.0								10.7	7.7
SSW		1.3	5.3	.7								7.3	8.0
SW		3.3	4.0	.7								8.0	7.1
WSW	2.0	2.0	2.7	.7								7.3	6.5
W	1.3	2.7	6.7	2.0								12.7	7.6
WNW		4.0	4.7	2.0								10.7	8.5
NW	.7	2.0	1.3	2.0								6.0	8.0
NNW		1.3	1.3	1.3	.7							4.7	10.4
VARBL													
CALM												4.7	
	8.7	30.0	44.0	12.0	.7							100.0	7.2

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUN  
MONTH

ALL WEATHER  
CLASS

16  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNOTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		.7	2.7	.7								4.0	8.8
NNE		1.3		.7								2.0	8.0
NE		1.3	1.3	.7								3.3	8.0
ENE		2.0	2.0									4.0	6.5
E	1.3		2.7									4.0	6.2
ESE		2.0	.7	.7								3.3	7.6
SE		2.0	2.0									4.0	6.3
SSE		1.3	.7									2.0	6.3
S	1.3	2.7	5.3	.7								10.0	7.1
SSW		2.7	1.3	.7								4.7	6.7
SW		3.3	2.7	1.3								7.3	8.2
WSW	.7	4.7	4.0	.7								10.0	6.8
W	.7	5.3	6.7	1.3								14.0	7.6
WNW	1.3	1.3	2.7	2.7								8.0	8.3
NW	2.0	2.7	2.7	1.3								8.7	6.7
NNW	1.3	2.0	2.0	2.0								7.3	7.6
VARBL												3.3	
CALM													
	8.7	35.3	39.3	13.3								100.0	7.0

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUN  
MONTH

ALL WEATHER  
CLASS

19  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIRE.	1-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	≥56	%	MEAN WIND SPEED
N	.7	.7	1.3									2.7	5.8
NNE		.7		.7								1.3	9.0
NE	.7	2.7										3.3	4.6
ENE		.7		.7								1.3	8.5
E	1.3	.7	2.7									4.7	6.1
ESE		1.3	.7	.7								2.7	7.8
SE	.7	4.0	3.3									8.0	6.3
SSE	.7	1.3	1.3									3.3	6.2
S	.7	5.3	2.7	1.3								10.0	7.4
SSW	.7	4.0	1.3	.7	.7	.7						8.0	8.2
SW	2.7	6.0	.7									9.3	4.7
WSW	.7	6.0	2.0	.7								9.3	5.6
W	5.3	8.0	1.3									14.7	4.3
WNW	.7	4.7	1.3	.7								7.3	5.5
NW	1.3	.7	.7									2.7	4.3
NNW	.7	2.0	.7	.7								4.0	7.0
VARBL													
CALM												7.3	
	15.7	46.7	20.0	6.0	.7	.7						100.0	5.5

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUN  
MONTH

ALL WEATHER  
CLASS

22  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNOTS) DIRE.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3		2.0									3.3	5.4
NNE	1.3	1.3										2.7	3.8
NE	1.3	.7										2.0	3.3
ENE	.7	1.3	.7									2.7	4.8
E		2.7	.7									3.3	6.0
ESE		2.0	.7									2.7	5.8
SE	1.3	2.0										3.3	3.8
SSE	2.7	5.3	2.0									10.0	5.0
S	4.0	5.3	4.7									14.0	5.4
SSW	2.7	6.7	1.3	1.3								12.0	5.4
SW	2.7	5.3	1.3									9.3	4.6
WSW	1.3	5.3										6.7	3.9
W	.7	4.7	1.3									6.7	4.9
WNW	.7	.7	.7									2.0	5.3
NW		2.0	.7	.7								2.7	5.0
NNW	1.3	1.3										3.3	5.4
VARBL												13.3	
CALM												100.0	4.3
	22.0	46.7	16.0	2.0									

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLIAM GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUN  
MONTH

ALL WEATHER

CLASS

ALL

HOURS (L S T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.9	.9	1.2	.6								3.7	6.8
NNE	.4	1.3	.2	.2								2.1	5.2
NE	.7	1.3	.7	.2								3.0	5.9
ENE	.7	1.2	2.1	.1								4.2	6.3
E	1.0	1.7	1.2									4.0	5.5
ESE	.5	1.9	.7	.2								3.3	5.8
SE	.5	1.8	1.1									3.4	5.7
SSE	1.6	2.7	.7	.1								5.2	4.9
S	1.2	3.7	3.2	.7								8.7	6.5
SSW	1.3	3.5	2.0	.6	.1	.1						7.6	6.1
SW	1.3	3.4	1.8	.2								6.8	5.7
WSW	1.0	4.7	1.4	.2								7.3	5.4
W	2.6	5.7	2.7	.7								11.7	5.5
WNW	1.2	4.1	2.2	.7								8.3	6.1
NW	1.0	2.0	1.0	.7								4.7	6.3
NNW	.9	1.8	1.1	1.0	.1							4.9	7.2
VARBL												11.0	
CALM												100.0	5.3
	17.0	42.0	23.6	6.2	.2	.1							

TOTAL NUMBER OF OBSERVATIONS

1200

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

JUL  
MONTH

ALL WEATHER

CLASS

01

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.9	2.6	.6									5.2	3.9
NNE			.6									.6	7.0
NE	.6	.6										1.3	3.0
ENE													
E		.6										.6	4.0
ESE		.6										.6	4.0
SE		.6										.6	6.0
SSE	1.9	1.3											
S	3.2	3.2										3.2	3.4
SSW	3.2	2.6	1.3	.6								6.5	3.2
SW	3.2	3.2	1.9	.6								7.7	4.6
WSW	.6	3.2	.6									11.0	4.9
W	3.9	7.7	1.3									4.5	4.9
WNW		1.9	.6									12.9	4.3
NW	1.3	1.9	.6									2.6	5.5
NNW	3.2	1.9	2.6									3.9	4.0
VARBL												7.7	4.8
CALM												31.0	
	23.2	34.2	10.3	1.3								100.0	3.0

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77  
YEARS

JUL  
MONTH

ALL WEATHER  
CLASS

04  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	5.8										7.1	4.1
NNE	.6	1.9										2.6	4.0
NE	1.3											1.3	2.0
ENE													
E	1.9											1.9	2.3
ESE													
SE	1.3	.6										1.9	3.0
SSE	1.3		.6									1.9	4.0
S	1.9	1.3	.6									3.9	3.5
SSW	2.6	1.3		.6								4.5	4.9
SW		1.3	1.3	.6								3.2	7.2
WSW	1.9	5.8	1.3									9.0	4.5
W	7.1	5.8	1.3									14.2	4.0
WNW	2.6	4.5										7.1	4.5
NW	3.9	3.2	1.3									8.4	3.9
NNW	1.3	3.9	.6									5.8	4.4
VARBL													
CALM												27.1	
	29.0	35.5	7.1	1.3								100.0	3.1

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUL  
MONTH

ALL WEATHER

CLASS

07

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	3.2	4.5	1.3									9.0	4.2
NNE	.6	1.3										1.9	3.7
NE	.6	1.9										2.6	4.3
ENE	1.3	1.3										2.6	3.5
E	.6	3.2	.6									4.5	5.0
ESE	.6											.6	3.0
SE	.6	1.3										1.9	3.3
SSE	1.3		.6									1.9	4.7
S	1.3	.6										1.9	3.3
SSW	2.6	1.9	.6									5.2	3.8
SW	.6	3.9	.6									5.2	5.4
WSW	3.9	3.2	.6	1.3								9.0	5.4
W	1.3	9.0	1.9									12.3	4.8
WNW	1.9	7.7	.6									10.3	4.2
NW	1.3	3.2		.6								5.2	5.5
NNW	4.5	5.2	1.3									11.0	4.3
VARBL													
CALM												14.8	
	26.5	48.4	8.4	1.9								100.0	3.9

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

JUL  
MONTH

ALL WEATHER  
CLASS

10  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	4.5	3.9	1.9								11.0	7.6
NNE	.6	2.6	1.9									5.2	5.4
NE	.6	.6										1.3	3.0
ENE	1.3	1.3	.6									3.2	4.4
E		2.6	1.3									3.9	6.5
ESE	.6	1.9										2.6	4.0
SE	.6	1.9	1.9									4.5	5.7
SSE	.6	.6										1.3	3.5
S	.6	2.6	.6									3.9	4.8
SSW	.6	3.2	1.9									5.8	6.0
SW	.6	1.9	.6									3.2	5.4
WSW	.6	3.9	1.9	1.3								7.7	6.8
W	1.3	6.5	5.8									13.5	5.9
WNW		5.8	3.2	.6								9.7	6.6
NW	1.3	5.8	1.9	1.3								10.3	6.3
NNW	.6	1.9	4.5									7.1	6.9
VARB													
CALM												5.8	
	11.0	47.7	30.3	5.2								100.0	5.8

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUL  
MONTH

ALL WEATHER  
CLASS

13  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	3.2	4.5	.6	.6							10.3	7.4
NNE	.6	1.3										1.9	4.3
NE	1.3	1.3	.6									3.2	5.2
ENE		1.3										1.3	5.0
E		1.3	.6									1.9	6.7
ESE		.6	.6									1.3	5.5
SE		3.2	.6	.6								4.5	6.6
SSE		1.9	1.9									3.9	6.8
S	.6		1.9									2.6	6.8
SSW		1.3	3.2	1.3								5.8	8.6
SW	.6	2.6	1.9	.6								5.8	6.6
WSW	3.2	1.9	4.5	1.3								11.0	6.6
W		8.4	7.7	.6								16.8	7.2
WNW	.6	3.9	5.2	.6								10.3	7.3
NW	1.9	3.2	2.6	.6								8.4	6.2
NNW		3.2	2.6	.6								6.5	6.9
VARBL													
CALM												4.5	
	10.3	38.7	38.7	7.1	.6							100.0	6.5

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUL  
MONTH

ALL WEATHER  
CLASS

16  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	2.6	3.2	2.6		.6							9.0	5.9
NNE	.6	.6										1.3	4.0
NE	.6	.6										1.3	4.0
ENE	1.3	.6	.6	.6								3.2	5.8
E	1.3	.6										1.9	3.0
ESE		3.2		.6								3.9	5.5
SE			2.6									2.6	8.3
SSE			1.3									1.3	8.0
S	.6	1.9	1.9	.6								5.2	6.8
SSW	.6	4.5	1.9	.6								7.7	6.8
SW	1.3	1.3	2.6	1.3								6.5	7.8
WSW	.6	3.2	3.9	.6								7.7	7.3
W	.6	4.5	8.4	1.3								14.8	7.9
WNW	.6	2.6	5.2	.6								9.0	7.4
NW	1.3	5.8	3.2	.6								11.0	6.4
NNW	.6	4.5	3.2	1.3								9.7	7.3
VARBL													
CALM												3.9	
	12.3	37.4	37.4	8.4	.6							100.0	6.6

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

JUL

MONTH

19

HOURS (L.S.T.)

ALL WEATHER

CLASS

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.9	.6	.6									3.2	4.0
NNE	1.3											1.3	2.0
NE	.6	1.9										2.6	4.3
ENE													
E		2.6	.6									3.2	5.6
ESE	.6	1.3										1.9	4.0
SE		1.9	2.6									4.5	7.3
SSE		3.9	3.2									7.1	6.6
S	1.3	1.3	1.3									3.9	5.0
SSW	2.6	3.9	.6									7.1	4.0
SW	3.9	3.2	1.3									8.4	4.3
WSW	2.6	9.0	.6									12.3	4.3
W	.6	11.0										11.6	4.6
WNW	1.9	3.9	1.9									7.7	4.7
NW	2.6	3.2	1.9	.6								8.4	5.8
NNW	1.9	2.6	1.3	.6								6.5	5.3
VARBL													
CALM												10.3	
	21.9	50.3	16.1	.6	.6							100.0	4.4

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUL  
MONTH

ALL WEATHER  
CLASS

22  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	1.9	.6									3.9	4.8
NNE		.6										.6	6.0
NE		.6										.6	6.0
ENE	.6											.6	3.0
E	.6											.6	3.0
ESE	.6	.6										.6	3.0
SE		2.6	.6									1.3	4.0
SSE	.6	2.6	2.6									3.2	4.8
S	4.5	3.9	1.9									5.8	5.8
SSW	3.9	5.8	1.9	.6								10.3	4.3
SW	.6	3.9	1.9									12.3	4.7
WSW	2.6	7.1	1.3									6.5	5.1
W	.6	7.7	1.3									11.0	5.1
WNW	3.2	3.2										9.7	3.5
NW	.6	3.9										6.5	3.5
NNW	1.9	1.3										4.5	4.6
VARBL												3.2	3.4
CALM												19.4	
	21.9	45.8	12.3	.6								100.0	3.8

TOTAL NUMBER OF OBSERVATIONS

155

DIRNA VOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUL  
MONTH

ALL WEATHER  
CLASS

ALL  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.8	3.3	1.8	.3	.2							7.3	5.7
NNE	.6	1.0	.3									1.9	4.5
NE	.7	1.0	.1									1.8	4.1
ENE	.6	.6	.2	.1								1.4	4.6
E	.6	1.4	.4									2.3	5.0
ESE	.3	1.0	.1	.1								1.5	4.6
SE	.3	1.5	1.0	.1								3.0	5.9
SSE	.7	1.3	1.3									3.3	5.7
S	1.8	1.9	1.0	.1								4.8	4.6
SSW	2.0	3.1	1.5	.5								7.0	5.3
SW	1.4	2.9	1.5	.4								6.2	5.6
WSW	1.9	4.7	1.9	.6								9.0	5.6
W	1.9	7.6	3.5	.2								13.2	5.6
WNW	1.4	4.2	2.1	.2								7.9	5.6
NW	1.8	3.8	1.5	.4	.1							7.5	5.5
NNW	1.8	3.1	2.0	.3								7.2	5.6
VARBL													
CALM												14.6	
	19.5	42.3	20.1	3.3	.2							100.0	4.6

TOTAL NUMBER OF OBSERVATIONS

1240

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

AUG  
MONTH

ALL WEATHER  
CLASS

01  
HOURS (L.S.T.)

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	.6	.6	1.3								3.9	6.8
NNE	1.3	1.9	.6									3.9	4.7
NE	1.9	.6										2.6	2.8
ENE	.6		.6									1.3	5.0
E		1.9	.6									2.6	5.8
ESE		1.3										1.3	5.5
SE		.6										.6	6.0
SSE	1.3	1.9										3.2	3.4
S	1.9	.6	1.3									3.9	4.0
SSW	1.9	1.9	2.6									6.5	5.4
SW	2.6	2.6	.6									5.8	4.1
WSW	2.6	3.2										5.8	3.7
W	6.5	6.5	.6									13.5	3.6
WNW	3.9	1.9		1.3								7.1	4.9
NW	1.3	1.9	.6									3.9	4.8
NNW	1.9	3.9										5.8	3.6
VARBL												28.4	
CALM												100.0	3.1
	29.0	31.6	8.4	2.6									

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

AUG  
MONTH

ALL WEATHER  
CLASS

04  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNOTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		3.2										3.2	4.0
NNE	.6	1.9										2.6	4.0
NE	.6	.6										1.3	4.0
ENE	1.9	1.9	1.3									5.2	4.6
E	2.6	1.3	.6									4.3	4.3
ESE	.6	.6										1.3	3.0
SE		1.9										1.9	4.3
SSE	.6	.6	.6									1.9	5.0
S	1.3	1.3	1.3									3.9	5.2
SSW	1.3	2.6	1.3									5.2	4.8
SW	3.2	3.2	1.3									7.7	4.1
WSW	3.9	1.9										5.8	3.0
W	7.1	3.2	.6									11.0	3.4
WNW	3.2	3.2		.6								7.1	4.4
NW	.6	5.2										5.8	4.8
NNW	2.6	2.6	.6									5.8	4.2
VARBL													
CALM												25.8	
	30.3	35.5	7.7	.6								100.0	3.1

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

AUG  
MONTH

ALL WEATHER  
CLASS

07  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.9	2.6	.6									5.2	4.4
NNE	1.3	1.3	.6									3.2	4.8
NE	1.9	1.9	.6									4.5	4.1
ENE		2.6	.6									3.2	5.4
E	1.3	2.6	.6									4.5	4.4
ESE													
SE	.6	1.3										1.9	3.3
SSE		.6	.6									1.3	6.5
S	1.3	1.3	.6									3.2	4.6
SSW	1.9	.6	1.3									3.9	5.2
SW	1.3	5.2										6.5	4.2
WSW	2.6	5.2	.6									8.4	4.5
W	1.9	4.5	1.3									7.7	4.8
WNW	5.8	6.5	.6									12.9	3.7
NW	3.9	1.9	.6									6.5	4.2
NNW	2.6	.6	1.9									5.2	4.6
VARBL													
CALM												21.9	
	28.4	38.7	11.0									100.0	3.4

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

AUG  
MONTH

ALL WEATHER  
CLASS

10  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.9	5.2	.6									7.7	5.0
NNE	1.3	3.2										4.5	4.3
NE	.6	1.3	1.3	.6								3.9	6.8
ENE	1.3	1.9	2.6									5.8	5.6
E	1.9	.6	1.3									3.9	4.3
ESE	.6	1.9	.6									3.2	4.8
SE	.6	1.3	1.3									3.2	5.4
SSE	.6	1.3	1.3									3.2	5.8
S	.6	1.3	1.9									3.9	6.7
SSW	1.3	1.3	1.9	.6								5.2	6.9
SW		3.2	.6									3.9	5.7
WSW	1.9	2.6	2.6									7.1	5.4
W	3.2	7.1	.6									11.0	4.4
WNW	2.6	7.1	3.9	.6								14.2	5.4
NW	3.2	2.6	1.3									7.1	4.3
NNW	.6	3.2	3.2									7.1	6.3
VARBL													
CALM												5.2	
	22.6	45.2	25.2	1.9								100.0	5.1

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
NAVAL OBSERVATION SERVICE  
DAVENPORT, MISSISSIPPI  
AGREEMENT, INC.

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURS TO OBSERVATIONS)

14773  
STATION

4154 GARRISON, MISSISSIPPI

73077

13

13  
13

2272200

5702 SURFACE WINDS JAN 78  
5702 SURFACE WINDS JAN 78

1800

TOTAL NUMBER OF OBSERVATIONS

155

SPEED (KNOTS)	1-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	≥ 56	%	BASED ON SPEED
N	2.6	3.9	1.3	1.3								9.7	6.1
NNE	1.3	1.3	1.3									1.9	5.8
N	1.3	1.3	1.3									2.6	6.0
NNE	1.3	1.3	1.3									4.2	5.4
E	2.6	3.9	1.3									5.8	5.7
ESE	2.6	3.9	1.3									2.6	2.5
SE	1.3	1.3	1.3									1.9	4.0
SSE	1.3	1.3	1.3									3.9	4.7
S	1.3	1.3	1.3									3.9	6.0
SSW	1.3	1.3	1.3									5.8	8.6
SW	1.3	1.3	1.3									7.2	5.8
WSW	1.3	1.3	1.3									9.0	5.6
W	1.3	1.3	1.3									11.0	7.6
WNW	1.3	1.3	1.3									11.0	6.8
NW	1.3	1.3	1.3									8.6	6.2
NNW	1.3	1.3	1.3									9.7	5.1
VARBL												3.2	
CALM												10.0	5.8

DIPNAVOCANMET SMOG

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

AUG  
MONTH

ALL WEATHER  
CLASS

16  
HOURS (L.S.T.)

CONDITION

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		.6	2.6									3.2	7.0
NNE	.6	.6	1.9	.6								3.9	7.2
NE													
ENE		1.3	2.6									3.9	7.3
E		3.9	.6	.6								5.2	6.4
ESE		1.9										1.9	5.0
SE		1.3		.6								1.9	6.7
SSE		1.9	.6	.6								3.2	7.0
S	.6	.6	.6	.6								1.9	8.3
SSW	1.3	1.9	3.2	1.3								7.7	7.4
SW		3.2	3.9									7.1	7.3
WSW	.6	5.8	3.2	.6								10.3	6.1
W	1.3	9.0	3.9									14.2	5.8
WNW	1.3	4.5	3.9									9.7	6.1
NW	3.2	5.2	3.2									11.6	5.1
NNW	3.2	3.9	2.6	.6								10.3	5.6
VAEBL													
CALM												3.9	
	12.3	45.2	32.9	5.8								100.0	6.0

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

AUG  
MONTH

ALL WEATHER

CLASS

19

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	1.9		.6								3.9	5.2
NNE	.6			.6								1.3	9.5
NE	.6	.6	1.9									3.2	6.4
ENE	.6	1.3	.6									2.6	5.8
E	1.9	4.5	.6									7.1	5.0
ESE	.6	1.3										1.9	3.7
SE	.6	2.6										3.2	3.8
SSE		2.6										2.6	5.8
S	.6	3.2		.6								4.5	5.7
SSW	1.9	3.2	1.9									7.1	4.6
SW	3.9	3.9	.6									8.4	4.0
WSW	3.2	3.2										6.5	3.8
W	10.3	5.2										15.5	3.2
WNW	2.6	3.9	.6									7.1	4.2
NW	2.6	1.3										3.9	3.2
NNW	.6	2.6										3.2	4.4
VARBL													
CALM												18.1	
	32.3	41.3	6.5	1.9								100.0	3.6

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

AUG  
MONTH

ALL WEATHER  
CLASS

22

HOURS (L.S.T.)

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.9	.6	.6		.6							3.9	6.8
NNE		.6	.6									1.3	7.5
NE	1.9											1.9	2.3
ENE													
E	1.3	2.6	.6									4.3	4.9
ESE	.6	.6										1.3	3.5
SE	1.9	1.3										3.2	3.6
SSE	1.3	1.3	1.3									3.9	4.7
S	3.9	2.6	1.3									7.7	4.2
SSW	1.9	3.9	1.3									7.1	4.9
SW	2.6	6.5										9.0	3.9
WSW	1.3	5.2	1.3									7.7	4.8
W	4.5	4.5										9.0	3.6
WNW	3.9	1.9										5.8	3.3
NW	1.3	1.3	1.9									4.5	5.4
NNW	3.2	1.9										5.2	3.0
VARBL													
CALM												23.9	
	31.6	34.8	9.0		.6							100.0	3.3

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

AUG

MONTH

ALL WEATHER

CLASS

ALL

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.4	2.3	.9	.4	.1							5.1	5.6
NNE	.8	1.3	.6	.2								2.8	5.5
NE	1.0	.7	.6	.1								2.5	4.9
ENE	.6	1.6	1.1									3.3	5.6
E	1.1	2.7	.9	.1								4.8	5.1
ESE	.6	1.0	.1									1.7	4.0
SE	.5	1.4	.2	.1								2.1	4.5
SSE	.7	1.4	.7	.1								2.9	5.2
S	1.3	1.6	1.0	.2								4.0	5.3
SSW	1.5	2.0	2.0	.4								6.0	6.0
SW	1.9	4.0	1.1									6.9	4.8
WSW	2.3	3.9	1.4	.1								7.6	4.8
W	4.4	5.4	1.5	.2								11.6	4.5
WNW	2.9	4.3	1.9	.3								9.4	5.0
NW	2.1	3.0	1.3	.1								6.5	4.9
NNW	2.1	3.0	1.4	.1								6.5	4.8
VARBL													
CALM												16.3	
	25.2	39.4	16.7	2.3	.1							100.0	4.2

TOTAL NUMBER OF OBSERVATIONS

1240

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

SEP  
MONTH

ALL WEATHER  
CLASS

01  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	2.7										3.3	4.2
NNE		2.0	.7									2.7	5.3
NE		2.7										2.7	4.3
ENE		2.0	.7									2.7	6.0
E	.7	2.0	3.3	.7								6.7	7.1
ESE	1.3	2.7										4.0	3.7
SE	1.3	1.3										2.7	3.3
SSE		2.0										2.0	5.0
S	.7	.7										1.3	2.5
SSW	.7	3.3	1.3	.7								6.0	6.3
SW	1.3	2.7			.7							4.7	5.9
WSW	1.3	2.0	1.3									4.7	5.3
W	2.7	5.3	.7									8.7	4.1
WNW		3.3	.7									4.0	5.7
NW	2.0	2.7	.7									5.3	4.0
NNW	2.0	2.7	2.0									6.7	4.7
VARBL													
CALM												32.0	
	14.7	40.0	11.3	1.3	.7							100.0	3.4

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

SEP

ALL WEATHER  
CLASS

04

MOON (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	1.3	1.3									3.3	5.4
NNE	2.0	2.0	1.3									5.3	4.6
NE	2.0	2.0	.7									4.7	4.6
ENE	.7	1.3	1.3									3.3	5.6
E	.7	.7	3.3	.7								5.3	7.5
ESE	2.0	2.0										4.0	3.3
SE	.7	1.3										2.0	4.0
SSE	1.3	.7	.7									2.7	3.8
S													
SSW	.7	2.7	1.3									4.7	5.1
SW		1.3	.7		.7							2.7	9.0
WSW	1.3	2.7										4.0	4.0
W	4.0	2.7	.7									7.3	3.7
WNW	3.3	4.7	1.3									9.3	4.5
NW	2.0	2.7										4.7	3.6
NNW	4.0	.7	3.3									8.0	4.7
VARBL													
CALM												28.7	
	25.3	28.7	16.0	.7	.7							100.0	3.4

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

SEP  
MONTH

ALL WEATHER  
CLASS

07  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	2.0	4.7	.7									7.3	4.2
NNE	.7	5.3										6.0	4.4
NE	.7	.7	.7									2.0	5.3
ENE	1.3	1.3	2.7									5.3	6.0
E	2.0	2.7										4.7	4.1
ESE		1.3										1.3	5.5
SE	1.3											1.3	2.5
SSE	.7	1.3										2.0	3.3
S	2.0	2.7	.7									5.3	4.3
SSW		1.3	1.3									2.7	6.8
SW	1.3	.7	1.3		.7							4.0	6.8
WSW	2.7	.7										3.3	3.0
W	4.7	6.7	.7									12.0	3.7
WNW	3.3	2.0	1.3									6.7	4.8
NW	.7	1.3	.7									2.7	5.8
NNW	1.3	4.0	2.7									8.0	5.3
VARBL													
CALM												25.3	
	24.7	36.7	12.7		.7							100.0	3.5

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

SEP  
MONTH

ALL WEATHER  
CLASS

10  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	2.7	1.3	.7								5.3	6.4
NNE		1.3	1.3									2.7	6.3
NE	.7	2.0										2.7	4.5
ENE		2.7	2.7									5.3	7.0
E	2.0	1.3	4.0									7.3	6.2
ESE	1.3	3.3	.7									5.3	5.0
SE	1.3	.7		.7								2.7	5.0
SSE	.7	.7	1.3									2.7	5.3
S	1.3	4.0	1.3									6.7	5.2
SSW	.7	1.3	1.3									3.3	6.4
SW		3.3	.7	.7								4.7	6.7
WSW	1.3	4.0	.7									6.0	4.7
W	3.3	4.7	2.0	.7								10.7	5.6
WNW	.7	3.3	3.3	.7								8.0	6.8
NW	.7	3.3	5.3	1.3								10.7	7.9
NNW	1.3	5.3	2.7	.7								10.0	6.2
VARBL													
CALM												6.0	
	16.0	44.0	28.7	5.3								100.0	5.7

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793

STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

SEP

MONTH

ALL WEATHER

CLASS

13

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	≥56	%	MEAN WIND SPEED
N	1.3	2.7	2.0	.7								6.7	6.5
NNE		2.7										2.7	4.5
NE			.7									.7	8.0
ENE	.7	1.3	.7									2.7	5.3
E	.7	1.3	.7	1.3								4.0	7.5
ESE	.7	2.7		1.3								4.7	7.6
SE	.7	2.0	1.3									4.0	6.0
SSE	.7	1.3	1.3									3.3	6.4
S		2.0	2.7									4.7	6.7
SSW		2.7	.7	1.3								4.7	7.9
SW		2.0	3.3	.7								6.0	8.6
WSW	2.0	2.7	2.0	.7								7.3	6.4
W	2.0	7.3	5.3	.7								15.3	6.3
WNW		2.0	6.7	.7								9.3	7.9
NW	.7	5.3	3.3	1.3								10.7	7.1
NNW	.7	2.7	2.0	.7								6.0	6.6
VARBL													
CALM												7.3	
	10.0	40.7	32.7	9.3								100.0	6.4

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

SEP  
MONTH

STATION NAME

ALL WEATHER  
CLASS

16  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	2.0	2.7	.7								6.0	6.8
NNE	.7	1.3	2.7									4.7	6.0
NIE	.7	.7										1.3	4.5
ENE	.7	.7	1.3									2.7	5.8
E	1.3	1.3	1.3	.7								4.7	6.9
ESE	.7	1.3	.7	.7								3.3	6.8
SE	1.3	4.0	1.3									6.7	5.3
SSE	.7	.7		.7								2.0	6.7
S	.7	2.0	2.0									4.7	6.0
SSW	.7	2.7	2.7	.7								6.7	6.7
SW	1.3	2.0	1.3	.7								5.3	5.6
WSW	.7	3.3	2.0	.7								6.7	6.7
W	2.7	8.0	5.3									16.0	5.4
WNW	.7	3.3	4.7	.7								9.3	7.0
NW	.7	3.3	4.0	.7	.7							8.7	7.5
NNW		1.3	4.0	1.3								6.7	8.9
VARBL													
CALM												4.7	
	14.0	38.0	36.0	6.7	.7							100.0	6.2

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

72-77

STATION NAME

YEARS

SEP  
MONTH

ALL WEATHER  
CLASS

19  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		2.7	.7									3.3	4.8
NNE		1.3	.7									2.0	7.0
NE		1.3										1.3	5.5
ENE	1.3	1.3	.7									3.3	4.6
E	1.3	2.7	3.3	.7								8.0	6.4
ESE		1.3	.7									2.0	6.7
SE	2.0	2.7	1.3									6.0	4.2
SSE	.7	2.0	1.3									4.0	5.5
S	1.3	1.3	3.3									6.0	5.8
SSW	4.7	2.7		.7								8.0	3.8
SW	1.3	2.7	1.3									5.3	4.6
WSW	1.3	2.7										4.0	3.8
W	6.0	1.3	.7	.7								8.7	4.2
WNW	2.7	2.7	1.3									6.7	4.0
NW	1.3	3.3	1.3									6.0	5.4
NNW	2.7	2.7	1.3									6.7	4.9
VARBL													
CALM												18.7	
	26.7	34.7	18.0	2.0								100.0	4.0

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

SEP  
MONTH

ALL WEATHER

CLASS

22

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		2.7	2.0									4.7	6.1
NNE		1.3										1.3	5.5
NE		1.3	.7									2.0	6.3
ENE		.7	1.3	1.3								3.3	9.0
E	2.0	2.7	.7									5.3	4.5
ESE		1.3	1.3									2.7	6.0
SE	1.3	3.3										4.7	3.7
SSE	2.0	2.0	2.0									6.0	5.1
S	.7	4.0	1.3									6.0	5.1
SSW	2.7	2.0	1.3									6.0	4.7
SW	.7	3.3	1.3	.7								6.0	6.0
WSW	1.3	2.0	.7	.7								4.7	5.4
W	3.3	3.3	.7									7.3	4.3
WNW	2.0	4.7	1.3		.7							8.7	5.8
NW	.7	2.0	1.3									4.0	6.0
NNW	1.3	.7										2.0	3.0
VARBL												25.3	
CALM												100.0	4.0
	18.0	37.3	16.0	2.7	.7								

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793

WILLOW GROVE, PENNSYLVANIA

73-77

SEP

STATION

STATION NAME

YEARS

MONTH

ALL WEATHER

ALL

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	2.7	1.3	.2								5.0	5.6
NNE	.4	2.2	.8									3.4	5.2
NE	.5	1.3	.3									2.2	5.0
ENE	.6	1.4	1.4	.2								3.6	6.2
E	1.3	1.8	2.1	.5								5.7	6.3
ESE	.7	2.0	.4	.2								3.4	5.5
SE	1.2	1.9	.5	.1								3.7	4.5
SSE	.8	1.3	.8	.1								3.1	5.2
S	.8	2.1	1.4									4.3	5.3
SSW	1.2	2.3	1.2	.4								5.2	5.7
SW	.7	2.2	1.2	.3	.2							4.8	6.5
WSW	1.5	2.5	.8	.2								5.1	5.2
W	3.6	4.9	2.0	.2								10.7	4.9
WRW	1.6	3.2	2.6	.2	.1							7.7	5.9
NW	1.1	3.0	2.1	.3	.1							6.6	6.4
NNW	1.7	2.5	2.2	.3								6.7	5.7
VARBL													
CALM												18.5	
	18.7	37.5	21.4	3.5	.4							100.0	4.6

TOTAL NUMBER OF OBSERVATIONS

1200

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

OCT  
MONTH

ALL WEATHER  
CLASS

01  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.9	1.9	.6	.6								5.2	4.8
NNE	1.3	1.9	.6									3.9	4.0
NE	2.6	2.6										5.2	3.9
ENE	1.3	3.2	1.3									5.8	5.4
E	.6	.6	.6									1.9	5.3
ESE	1.9	.6	.6									2.6	6.0
SE	.6	.6										1.3	3.5
SSE	1.3											1.3	3.0
S	1.9	.6										2.6	2.8
SSW	.6	1.9										2.6	4.0
SW	.6	3.2	.6									4.5	5.3
WSW	2.6	1.9	1.3									5.8	4.4
W	2.6	2.6	1.9									7.1	4.6
WNW	.6	7.1	1.3	1.3								10.3	6.4
NW	2.6	3.9	.6									7.1	4.1
NNW	2.6	2.6	1.3	.6								7.1	5.4
VARBL												25.3	
CALM												100.0	3.6
	23.9	36.8	11.0	2.6									

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

OCT

MONTH

04

HOURS (L.S.T.)

ALL WEATHER

CLASS

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	3.2	2.6		.6								6.5	4.0
NNE	1.3	.6										1.9	3.3
NE	.6	5.2	1.3									7.1	4.8
ENE	3.2	1.9	1.9									7.1	4.6
E		1.9	.6	.6								3.2	7.0
ESE													
SE	.6											.6	2.0
SSE		.6	.6	.6								1.9	8.7
S	.6	1.3										1.9	4.0
SSW	.6	.6	.6	.6								2.6	7.0
SW	.6	1.9										2.6	3.5
WSW	3.2	4.5	.6									8.4	4.0
W	1.9	7.7	1.3	.6								11.6	5.3
WNW	1.3	6.5	1.9		.6							10.3	6.3
NW	.6	1.9	1.3	1.3								5.2	7.5
NNW	3.2	1.9	1.3									6.5	4.2
VARIABLE													
CALM												22.6	
	21.3	39.4	11.6	4.5	.6							100.0	4.0

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

007  
MONTH

ALL WEATHER  
CLASS

07  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.9	2.6	.6	.6								5.8	4.9
NNE	1.3	2.6										3.9	3.8
NE	1.3	1.9	1.9	.6								5.8	6.8
ENE	1.3	3.9	.6									5.8	4.7
E	1.9	2.6		.6								5.2	5.3
ESE	.6	.6										1.3	3.5
SE	.6	1.3										1.9	3.3
SSE	.6	.6										1.3	3.5
S	2.6	1.3	1.3	.6								5.8	5.7
SSW	1.3	1.3	.6									3.2	4.8
SW	.6	1.9										2.6	4.5
WSW	1.3	1.9										3.2	4.2
W	1.3	10.3										11.6	4.4
WNW	2.6	7.7	2.6	.6	.6							14.2	6.3
NW	.6	1.3	.6	.6								3.2	7.4
NNW	2.6	4.5	2.6	.6								10.3	5.8
VARBL													
CALM												14.8	
	22.6	46.5	11.0	4.5	.6							100.0	4.5

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77  
YEARS

OCT  
MONTH

ALL WEATHER  
CLASS

10  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	3.9	3.9	.6								9.0	7.1
NNE	.6	2.6	1.9									5.2	5.8
NE	.6	2.6	2.6	.6								6.5	7.1
ENE	3.2	4.5	.6									8.4	4.0
E	1.3	3.2	2.6	1.3								8.4	6.7
ESE	1.9		.6									2.6	4.0
SE	.6											.6	3.0
SSE	1.3	.6										1.9	2.7
S	1.3	1.9		.6								3.9	5.5
SSW	.6	.6	1.9	.6								3.9	6.8
SW		1.3	1.3	1.3								3.9	9.0
WSW	.6	2.6	2.6									5.8	6.1
W	1.9	3.9	2.6									8.4	5.4
WNW	.6	4.5	3.2	3.2	.6							12.3	8.7
NW		.6	4.5	3.2								8.4	9.8
NNW		2.6	3.9	1.9								8.4	8.1
VARBL													
CALM												2.6	
	15.5	35.5	32.3	13.5	.6							100.0	6.7

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

OCT  
MONTH

ALL WEATHER  
CLASS

13  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	1.9										3.2	3.6
NNE		1.9	3.2									5.2	6.8
NE	.6	1.3	1.3		.6							3.9	7.8
ENE	1.3	1.9	.6	.6								4.5	6.6
E	1.3	3.9	2.6									7.7	5.8
ESE		1.3	.6									1.9	5.7
SE		.6	.6									1.3	7.5
SSE	1.3	1.3	.6									3.2	5.2
S	.6	1.9	1.9	1.3								5.8	7.7
SSW	.6	1.3	1.9									3.9	7.0
SW	1.9	1.3	1.9	.6								5.8	5.7
WSW	.6	1.9	1.9	.6								5.2	7.4
W	3.2	2.6	4.5									10.3	5.6
WNW		1.9	5.8	1.3	.6							9.7	9.6
NW	1.9	1.3	5.2	5.8	.6							14.8	9.6
NNW		1.9	5.2	2.6		.6						10.3	10.2
VARBL													
CALM												3.2	
	14.6	28.4	38.1	12.9	1.9	.6						100.0	7.3

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

HILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

UCT  
MONTH

ALL WEATHER  
CLASS

16  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	1.3	1.3	.6								3.9	6.7
NNE				.6								.6	14.0
NE	.6	1.3	.6									2.6	4.8
ENE		3.2	1.3	.6								5.2	6.8
E	1.3	2.6	1.3									5.2	5.1
ESE	1.9	.6	1.3									3.9	4.7
SE		.6	1.3	1.3								3.2	9.2
SSE	.6		.6	.6								1.9	7.3
S	1.3	3.2	.6									5.2	4.1
SSW	.6	3.2	.6		.6							5.2	6.4
SW		1.9	2.6									4.5	7.6
WSW	1.3	1.9	.6									3.9	5.0
W	.6	7.7	4.5	.6								13.5	6.3
WNW	1.3	1.3	5.8			.6						9.0	8.4
NW	1.9	3.2	6.5	1.9								13.5	7.4
NNW	1.9	1.3	4.5	3.9								11.6	8.6
VARBL													
CALM												7.1	
	14.2	33.5	33.5	10.3	.6	.6						100.0	6.4

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

UCT  
MONTH

19  
HOURS (L.S.T.)

ALL WEATHER  
CLASS

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	1.3	1.9									3.9	6.2
NNE	1.3	1.3	.6		.6							3.9	6.7
NE	1.3											1.3	2.0
ENE		2.6	1.3									3.9	6.0
E	1.9	3.2	1.3									6.5	4.5
ESE		2.6	.6									3.2	5.8
SE	.6	1.9										2.6	4.3
SSE		2.6	.6	.6								3.9	6.8
S	1.3	1.9	.6									3.9	4.5
SSW	1.3	1.9	1.9									5.2	4.9
SW	1.9	4.5	.6									7.1	4.3
WSW	1.9	3.2										5.2	3.5
W	2.6	5.2										7.7	4.1
WNW		4.5	1.3	.6								6.5	6.1
NW	1.3	3.2	1.9	.6	.6							7.7	7.1
NNW	1.9	2.6	1.9	.6	.6							7.7	7.0
VARBL													
CALM												20.0	
	18.1	42.6	14.8	2.6	1.9							100.0	4.3

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

OCT  
MONTH

ALL WEATHER  
CLASS

22  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	3.2		.6								5.2	5.0
NNE	2.6	3.2	.6	.6								7.1	4.8
NE	2.6	.6										3.2	2.6
ENE	2.6	1.3		.6								4.5	4.6
E	.6	2.6	.6									3.9	4.7
ESE	1.3	1.3	1.3									3.9	4.7
SE	.6		.6									1.3	5.5
SSE	1.3	.6	.6									2.6	4.0
S	1.9	1.9	.6									4.5	4.1
SSW	.6		.6									1.3	5.0
SW	2.6	5.2	1.3	.6								9.7	5.2
WSW		5.2	.6									5.8	5.4
W	2.6	3.9	.6									7.1	4.3
WNW	.6	4.5	.6	1.3								7.1	6.4
NW	.6	3.2	1.3									5.2	5.4
NNW	1.3	3.9	2.6									7.7	5.9
VARBL												20.0	
CALM												100.0	4.0
	23.2	40.6	12.3	3.9									

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793

WILLOW GROVE, PENNSYLVANIA

73-77

OCT

STATION NAME

YEARS

MONTH

ALL WEATHER

ALL

CLASS

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.5	2.3	1.0	.5								5.3	5.4
NNE	1.0	1.8	.9	.2	.1							4.0	5.4
NE	1.3	1.9	1.0	.2	.1							4.4	5.4
ENE	1.6	2.8	1.0	.2								5.6	5.2
E	1.1	2.6	1.2	.3								5.2	5.6
ESE	.7	1.0	.6									2.4	5.0
SE	.5	.6	.3	.2								1.6	5.6
SSE	.8	.8	.4	.2								2.3	5.4
S	1.5	1.8	.6	.3								4.2	5.1
SSW	.8	1.4	1.0	.2	.1							3.5	5.8
SW	1.0	2.7	1.0	.3								5.1	5.6
WSW	1.5	2.9	1.0	.1								5.4	5.0
W	2.1	5.5	1.9	.2								9.7	5.1
WNW	.9	4.8	2.8	1.0	.3	.1						9.9	7.3
NW	1.2	2.3	2.7	1.7	.2							8.1	7.7
NNW	1.7	2.7	2.9	1.3	.1	.1						8.7	7.1
VARBL													
CALM												14.5	
	19.2	37.9	20.6	6.9	.8	.2						100.0	5.1

TOTAL NUMBER OF OBSERVATIONS

1240

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

## PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEAR

NDV  
MONTH

ALL WEATHER

CLASS

01

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	≥56	%	MEAN WIND SPEED
N	.7	2.0		.7								3.3	5.4
NNE		2.0										2.0	5.3
NE	.7	.7										1.3	4.0
ENE	.7	.7	.7	.7								2.7	7.8
E		2.0	2.0	.7								4.7	8.0
ESE	.7	.7										1.3	3.0
SE	1.3	2.0										3.3	4.0
SSE	.7											.7	3.0
S	1.3	2.7	.7									4.7	4.9
SSW	2.0	1.3	2.0									5.3	5.4
SW	2.7	3.3		.7								6.7	4.7
WSW	2.7	.7		.7								4.0	5.0
W	2.7	8.7	3.3	.7								15.3	5.6
WNW	1.3	6.7	2.7	1.3	.7							12.7	6.6
NW	2.0	2.7	2.7	.7								8.0	6.4
NNW		.7	2.0	1.3								4.0	8.7
VARBL													
CALM												20.0	
	19.3	36.7	16.0	7.3	.7							100.0	4.7

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

NOV  
MONTH

ALL WEATHER

CLASS

04

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7		.7									1.3	5.0
NNE	.7	1.3	.7									2.7	5.5
NE	1.3	1.3	.7									3.3	4.8
ENE		.7	.7	.7								2.0	10.0
E	.7		.7	1.3								2.7	8.8
ESE	.7	2.0	.7									3.3	5.4
SE	.7		.7									.7	3.0
SSE	.7	2.7	.7									4.0	4.5
S	1.3	.7										2.0	3.7
SSW	2.0		2.0									4.0	5.0
SW	2.7	2.0	1.3									6.0	4.3
WSW	2.0	4.7	1.3									8.0	4.9
W	4.0	8.7	2.7	1.3								16.7	5.3
WRW	.7	5.3	3.3	.7								10.0	6.3
NW	2.7	1.3	2.0	2.0	.7							8.7	7.2
NNW	2.0	1.3	1.3									4.7	4.6
VAZBL													
CALM												20.0	
	22.7	32.0	18.7	6.0	.7							100.0	4.5

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

NOV  
MONTH

ALL WEATHER  
CLASS

07  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNOTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7		.7	.7								2.0	8.7
NNE	.7	1.3	.7									2.7	5.5
NE		1.3	.7									2.0	6.3
ENE		2.0		.7								2.7	8.5
E	2.0	1.3	1.3	.7								5.3	6.3
ESE	.7	.7										1.3	3.5
SE	.7	.7										1.3	3.5
SSE	.7	1.3	.7									2.7	5.3
S	.7	1.3	1.3									3.3	5.6
SSW	2.0	2.0										4.0	3.8
SW	5.3	.7	.7	.7								7.3	4.1
WSW	4.7	3.3	.7	.7								9.3	4.6
W	6.0	7.3	2.0	2.0								17.3	5.2
WNW	.7	4.7	2.0	.7								8.0	6.5
NW	2.0	4.0	1.3	.7								8.0	5.6
NNW	.7	4.0	2.7	.7								8.0	6.9
VARBL												14.7	
CALM												100.0	4.7
	27.3	36.0	14.7	7.3									

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

NOV  
MONTH

ALL WEATHER  
CLASS

10  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N			1.3	1.3								2.7	10.8
NNE		.7	.7									1.3	7.0
NE		1.3	1.3									2.7	7.0
ENE	.7	1.3	2.0									4.0	6.8
E		.7	2.7		.7							4.0	9.7
ESE		2.0										2.0	4.0
SE		.7	1.3									2.0	6.3
SSE		1.3	2.0									3.3	7.2
S		2.0	1.3									3.3	6.6
SSW		1.3	1.3									2.7	7.5
SW		2.7	2.7									5.3	6.9
WSW	1.3	3.3	2.7	.7		.7						8.7	8.1
W	5.3	3.3	4.0	2.7								15.3	6.4
WNW		3.3	4.0	4.0	.7							12.0	10.1
NW		2.7	6.0	2.7	.7							12.0	9.6
NNW	1.3	2.7	5.3	1.3	.7							11.3	7.9
VARBL													
CALM												7.3	
	8.7	29.3	36.7	12.7	2.7	.7						100.0	7.4

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

NOV  
MONTH

ALL WEATHER  
CLASS

13  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	.7	2.0									3.3	7.0
NNE	.7	1.3	1.3									3.3	6.0
NE	.7		.7									1.3	5.0
ENE		2.0	.7									2.7	6.0
E	.7		2.7	1.3								4.7	9.6
ESE	.7	.7	.7									2.0	5.7
SE		1.3										1.3	5.0
SSE	1.3		2.7									4.0	5.3
S		.7	.7	.7								2.0	9.7
SSW		4.7	3.3	2.7								10.7	8.1
SW	.7	1.3	2.0	.7								4.7	7.6
WSW	.7	1.3	2.0	1.3								5.3	7.9
W	.7	3.3	9.3	3.3	.7	.7						18.0	9.8
WNW	.7	4.0	2.0	3.3	.7							10.7	9.0
NW		2.7	8.0	2.7								13.3	9.0
NNW			6.0	3.3								9.3	10.2
VARBL													
CALM												3.3	
	7.3	24.0	44.0	19.3	1.3	.7						100.0	8.2

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

NOV  
MONTH

ALL WEATHER  
CLASS

16  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	.7	1.3	.7								2.7	8.3
NNE	.7	2.7	.7									4.0	5.2
NE		.7										.7	4.0
ENE		.7	1.3									2.0	7.3
E		1.3	2.0	2.0								5.3	9.1
ESE		1.3	.7									2.0	6.3
SE	.7	1.3		.7								2.7	5.8
SSE	.7		.7	.7								2.0	7.0
S	1.3		1.3									2.7	4.8
SSW	1.3	4.7	3.3									9.3	6.1
SW		2.7	2.7	.7								3.3	9.4
WSW	2.0	5.3	1.3									8.7	4.8
W	1.3	5.3	6.0	1.3	.7							14.7	7.7
WNW	.7	4.7	3.3	2.7	.7							12.0	7.9
NW	.7	2.0	7.3	3.3								13.3	8.7
NNW		2.7	4.7		.7							8.0	8.8
VARBL													
CALM												6.7	
	9.3	33.3	36.7	12.0	2.0							100.0	6.9

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEAR

NOV  
MONTH

ALL WEATHER  
CLASS

19  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.7	.7										1.3	3.5
NNE	.7											.7	2.0
NE		.7	.7									1.3	7.5
ENE		1.3	.7									2.0	6.7
E	1.3	.7	2.7		.7							5.3	8.0
ESE	.7	.7	.7	.7								2.7	7.0
SE	.7	.7	.7									1.3	8.0
SSE	2.0	1.3		.7								4.0	5.0
S	1.3	2.7	.7	.7								5.3	5.9
SSW	2.7	3.3										6.0	3.6
SW	4.0	3.3	1.3									8.7	4.2
WSW	2.7	2.0	2.0									6.7	4.7
W	3.3	8.0	4.0									15.3	5.3
WNW	1.3	2.0	2.7	.7	.7							7.3	7.5
NW	.7	2.0	6.0	1.3								10.0	8.3
NNW	2.7	3.3	1.3	.7								8.0	5.3
VARBL													
CALM												14.0	
	24.0	32.7	23.3	4.7	1.3							100.0	5.0

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

## PERCENTAGE FREQUENCY OF WIND DIRECTION AND SPEED (FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

NOV  
MONTH

ALL WEATHER  
CLASS

22  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	2.0										3.3	3.4
NNE		1.3	.7									2.0	6.3
NE	1.3	.7										2.0	2.7
ENE		1.3	1.3			.7						3.3	10.2
E	.7		1.3	1.3								3.3	8.2
ESE		.7	1.3									2.0	6.7
SE		1.3	.7									2.0	6.0
SSE	.7	4.0										4.7	4.0
S	2.0	1.3	1.3									4.7	4.6
SSW	2.0	3.3	.7	1.3								7.3	5.2
SW	1.3	2.7	.7	1.3								6.0	6.7
WSW	2.0	3.3										5.3	4.1
W	6.7	4.0	3.3	.7								14.7	4.8
WNW		4.7	1.3	2.0	.7							8.7	8.5
NW		2.7	7.3	.7								10.7	7.9
NNW	2.7	2.0	.7	1.3								6.7	5.7
VARBL													
CALM												13.3	
	20.7	35.3	20.7	8.7	.7	.7						100.0	5.2

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

NOV

MONTH

ALL WEATHER  
CLASS

ALL  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	.7	.7	.4								2.5	6.6
NNE	.4	1.3	.6									2.3	5.6
NE	.5	.8	.5									1.8	5.3
ENE	.2	1.2	.9	.2		.1						2.7	7.9
E	.7	.7	1.9	.9	.2							4.4	8.4
ESE	.4	1.1	.5	.1								2.1	5.4
SE	.4	1.0	.3	.1								1.8	5.3
SSE	.8	1.3	.8	.2								3.2	5.2
S	1.0	1.4	.9	.2								3.5	5.5
SSW	1.5	2.6	1.6	.5								6.2	5.8
SW	2.1	2.0	1.4	.5								6.0	5.6
WSW	2.2	3.0	1.2	.4		.1						7.0	5.5
W	3.7	6.1	4.3	1.5	.2	.1						15.9	6.3
WNW	.7	4.4	2.7	1.9	.5							10.2	7.9
NW	1.0	2.5	5.1	1.7	.2							10.5	8.0
NNW	1.2	2.1	3.0	1.1	.2							7.5	7.5
VARBL													
CALM												12.4	
	17.4	32.4	26.6	9.7	1.2	.2						100.0	5.8

TOTAL NUMBER OF OBSERVATIONS

1200

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77  
YEARS

DEC  
MONTH

01  
HOURS (L.S.T.)

ALL WEATHER  
CLASS

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		1.3	2.6		.6							4.5	8.9
NNE	.6	.6										1.3	4.5
NE	1.3	2.6		.6								5.2	5.1
ENE	.6	1.9	.6	.6		.6						4.5	9.6
E	.6	1.3	.6									2.6	5.0
ESE		.6										.6	5.0
SE	.6		.6									1.3	5.0
SSE	1.3	.6		.6								2.6	5.3
S	1.9	1.9	.6	.6								5.2	5.1
SSW		1.3		.6								1.9	8.0
SW	1.3	1.3	1.3	.6								4.5	6.3
WSW	1.3	4.5	1.9	.6								8.4	5.6
W	2.6	3.2	4.5									10.3	5.2
WNW	1.3	1.9	3.9	3.2	.6							11.0	8.8
NW	.6	1.3	4.5	.6	.6							7.7	8.7
NNW	2.6	4.5		.6								7.7	5.1
VARBL													
CALM												20.6	
	17.4	29.0	21.3	9.0	1.9	.6						100.0	5.3

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

DEC  
MONTH

ALL WEATHER  
CLASS

04  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	2.6		.6								3.9	6.0
NNE		3.2	1.3	.6								5.2	6.8
NE	.6	1.3	1.3									3.2	6.2
ENE		1.3		1.9								3.2	10.4
E	.6	1.3	.6									2.6	4.3
ESE	1.3		.6									1.9	4.7
SE	1.3	.6										2.6	3.0
SSE	.6	.6	.6	.6								2.6	7.5
S		1.3										1.3	4.5
SSW		1.3	1.9		.6							3.9	9.3
SW		1.9	.6									2.6	6.3
WSW	1.9	1.9	1.9									5.8	5.6
W	2.6	6.5	.6	2.6								12.3	6.2
WNW	1.3	3.2	6.5	1.3	.6	.6						13.5	8.4
NW	1.9	3.2	3.2	.6								9.0	6.3
NNW	.6	2.6	5.2									8.4	7.1
VARIABLE													
CALM												18.1	
	14.2	32.9	24.5	8.4	1.3	.6						100.0	5.5

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

DEC

MONTH

07

HOURS (L.S.T.)

ALL WEATHER

CLASS

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	1.3	.6	1.3								3.9	7.5
NNE		1.9	.6	.6								3.2	7.6
NE	.6		1.9									2.6	6.8
ENE	1.3	1.3	1.3	.6	.6							5.2	8.3
E	.6	1.9	.6	.6								3.9	5.8
ESE		1.3	.6									1.9	6.3
SE	1.3	1.3		.6								3.2	5.4
SSE				1.3								1.3	13.0
S	.6	.6										1.3	3.5
SSW	1.3	2.6	1.3	.6	.6							6.5	7.2
SW													
WSW		2.6	3.2									5.8	6.7
W	3.2	3.9	5.8	1.3								14.2	6.0
WNW		2.6	3.9	2.6	.6							9.7	9.7
NW	1.9	3.9	3.9	.6								10.3	6.2
NNW	1.9	1.3	1.3	1.3								5.8	7.0
VARBL													
CALM												21.3	
	13.5	26.5	25.2	11.6	1.9							100.0	5.6

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

DEC  
MONTH

ALL WEATHER  
CLASS

10  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N		3.2	1.9	.6								5.8	7.7
NNE		.6	2.6									3.2	8.0
NE	1.3	.6	.6	.6								3.2	5.8
ENE	.6	1.9	1.3	1.9								5.8	7.9
E		3.9	1.3	1.3								6.5	7.4
ESE	.6	.6	1.3									2.6	6.3
SE		.6	.6									1.3	6.5
SSE	.6	1.9		.6								3.2	6.6
S		2.6	3.2									5.8	6.6
SSW		1.9	.6	.6								3.2	7.0
SW	1.3	.6	2.6	.6	.6							5.8	8.1
WSW	.6	3.9	1.9									6.5	5.7
W	.6	1.9	3.2	1.9								7.7	7.9
WNW		1.3	4.5	1.9	.6							8.4	10.2
NW		3.2	6.5	4.5	.6							14.8	10.0
NNW		3.9	1.9	2.6								8.4	8.2
VARBL													
CALM												7.7	
	5.8	32.9	34.2	17.4	1.9							100.0	7.4

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

DEC  
MONTH

13  
HOURS (L.S.T.)

ALL WEATHER  
CLASS

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	2.6	2.6									6.5	6.4
NNE	.6	1.9	.6	1.3								4.5	7.9
NE	.6	.6										1.3	4.0
ENE	1.3	3.2	.6	.6								5.8	5.6
E	1.3	3.2		1.3								5.8	6.3
ESE	.6	.6										1.3	4.0
SE				.6								.6	11.0
SSE	.6	.6		.6								1.9	6.3
S	.6	1.3	3.2	.6								5.8	7.1
SSW		1.3	1.9	1.9	.6							5.8	10.6
SW	1.3	1.9	2.6	.6								6.5	6.8
WSW		3.2	1.3	.6								5.2	6.5
W		1.3	3.2	4.5								9.0	10.4
WNW	.6	2.6	1.9	5.8	1.3							12.3	10.6
NW		1.3	4.5	4.5								10.3	10.3
NNW		1.9	3.9	5.2	1.3							12.3	10.7
VARBL													
CALM												5.2	
	9.0	27.7	26.5	28.4	3.2							100.0	8.2

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

DEC  
MONTH

ALL WEATHER

CLASS

16

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.9	1.3	1.3	1.3								5.8	6.6
NNE			.6	1.3								1.9	10.0
NE	1.3	3.2										4.5	4.3
ENE	.6	1.9	.6	.6	1.3							5.2	9.5
E		.6	1.3									1.9	7.7
ESE	1.3		.6									1.9	4.0
SE		.6	.6									1.3	7.0
SSE	1.3	1.3										2.6	4.0
S	.6	3.9	2.6		.6							7.7	7.2
SSW	.6	5.2	1.3		.6							7.7	6.1
SW	.6	1.9	1.9									4.5	6.1
WSW	1.3	.6	1.3	1.9								5.2	8.4
W		3.2	5.8	.6								9.7	7.7
WNW	1.3	2.6	4.5	3.9	.6	.6						13.5	10.1
NW	1.3	3.2	5.2	3.2	1.3							14.2	9.2
NNW		2.6	1.9	2.6								7.1	9.1
VARBL													
CALM												5.2	
	12.3	32.3	29.7	15.5	4.5	.6						100.0	7.5

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

DEC  
MONTH

ALL WEATHER

CLASS

19

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	.6	2.6	.6								4.5	8.1
NNE	1.3		1.3									2.6	5.0
NE	.6	1.3			.6							2.6	7.3
ENE	.6	3.9	.6									5.2	5.0
E		2.6	1.9	.6								5.2	8.4
ESE		.6										.6	4.0
SE	.6		.6	.6								1.9	8.3
SSE			.6	.6								1.3	11.0
S		1.3	2.6									3.9	6.8
SSW	.6		1.9	.6								3.2	8.8
SW	3.2	3.2	1.3	.6								8.4	4.8
WSW		1.9	1.3									3.2	5.8
W	2.6	5.2	3.2	.6								11.6	5.7
WNW	2.6	1.9	3.9	2.6	1.3							12.3	8.9
NW	1.9	1.9	1.9	1.9								7.7	6.9
NNW	.6	3.9	.6	1.9	.6							7.7	7.5
VARBL													
CALM												18.1	
	15.5	28.4	24.5	11.0	2.6							100.0	5.7

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

DEC

MOUTH

ALL WEATHER  
CLASS

22

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	1.3	1.3	1.9									3.2	7.6
NNE	1.3	1.3	.6	.6								3.9	6.0
NE	.6			.6								1.3	9.5
ENE			3.9			.6						4.5	11.3
E	1.9	1.3										3.2	3.8
ESE	1.3	.6	.6									2.6	4.3
SE		.6	.6									1.3	8.0
SSE	1.9	.6	1.9									4.5	5.4
S	.6	.6	.6	1.3								3.2	7.8
SSW	1.3	1.9	.6									3.9	4.5
SW	1.3	1.9	1.3									4.5	4.9
WSW	.6	2.6	2.6									5.8	5.7
W	1.9	3.2	2.6	1.9								9.7	6.3
WNW		3.9	6.5	2.6		.6						13.5	9.4
NW	1.3	3.2	2.6	.6								7.7	6.3
NNW		3.2	1.3	1.3								5.8	7.6
VARBL													
CALM												21.3	
	14.2	26.5	27.7	9.0		1.3						100.0	5.5

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

DEC

MONTH

ALL WEATHER

CLASS

ALL

HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.6	1.8	1.7	.6	.1							4.8	7.3
NNE	.5	1.2	1.0	.6								3.2	7.1
NE	1.0	1.2	.5	.2	.1							3.0	5.8
ENE	.6	1.9	1.1	.8	.2	.2						4.9	8.2
E	.6	2.0	.8	.5								4.0	6.4
ESE	.6	.6	.5									1.7	5.0
SE	.6	.5	.4	.2								1.7	6.1
SSE	.8	.7	.4	.6								2.5	6.6
S	.6	1.7	1.6	.3	.1							4.3	6.5
SSW	.5	1.9	1.2	.6	.3							4.3	7.6
SW	1.1	1.6	1.5	.3	.1							4.6	6.1
WSW	.7	2.7	1.9	.4								5.7	6.2
W	1.7	3.5	3.6	1.7								10.6	6.8
WNW	.9	2.5	4.4	3.0	.7	.2						11.8	9.5
NW	1.1	2.7	4.0	2.1	.3							10.2	8.2
NNW	.7	3.0	2.0	1.9	.2							7.9	8.0
VARBL													
CALM												14.7	
	12.7	29.5	26.7	13.8	2.2	.4						100.0	6.3

TOTAL NUMBER OF OBSERVATIONS

1240

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

ALL  
MONTH

ALL WEATHER  
CLASS

ALL  
HOURS (L.S.T.)

CONDITION

5702 SURFACE WINDS JAN 78

SPEED (KNTS) DIR.	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	22 - 27	28 - 33	34 - 40	41 - 47	48 - 55	≥ 56	%	MEAN WIND SPEED
N	.9	1.9	1.4	.7	.0	.0						5.0	6.6
NNE	.6	1.2	.6	.2	.0	.0						2.7	5.8
NE	.0	1.0	.6	.2	.0							2.4	5.7
ENE	.5	1.4	1.0	.3	.0	.0						3.3	6.5
E	.9	2.0	1.7	.4	.0		.0					5.0	6.3
ESE	.6	1.3	.9	.1								2.8	5.9
SE	.5	1.2	.7	.1								2.3	5.7
SSE	.8	1.3	.8	.2	.0							3.0	5.6
S	1.0	1.9	1.3	.3	.0							4.6	6.0
SSW	1.2	2.3	1.6	.5	.1	.0						5.7	6.2
SW	1.3	2.5	1.4	.4	.0							5.6	5.8
WSW	1.4	2.9	1.5	.3	.0	.0						6.2	5.7
W	2.4	5.3	3.3	1.2	.1	.0						12.3	6.3
WNW	1.3	3.5	3.2	1.6	.3	.1	.0					9.9	7.7
NW	1.2	2.7	2.9	1.6	.2	.1	.0					8.9	8.0
NNW	1.1	2.4	2.1	1.4	.2	.0						7.2	7.7
VARBL												12.9	
CALM												100.0	5.7
	16.3	34.8	25.0	9.5	1.2	.3	.0						

TOTAL NUMBER OF OBSERVATIONS

14608

NAVAL WEATHER SERVICE  
DETACHMENT  
ASHEVILLE, NC

# SURFACE WINDS

PERCENTAGE FREQUENCY OF WIND  
DIRECTION AND SPEED  
(FROM HOURLY OBSERVATIONS)

14793

WILLOW GROVE, PENNSYLVANIA

73-77

ALL

STATION

STATION NAME

YEARS

ALL

MONTH

INSTRUMENT

CLASS

CIG 200 TO 1400 FT W/VSBY 1/2 MI OR MORE,

CONDITION

AND/OR VSBY 1/2 TO 2-1/2 MI W/CIG 200 FT OR MORE

SPEED (KNTS) DIR.	1-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	≥56	%	MEAN WIND SPEED
N	.6	1.7	.9	.5	.1							3.8	6.6
NNE	.7	1.3	1.1	.6	.0							3.7	7.1
NE	.9	2.2	1.5	.6	.1							5.2	6.6
ENE	.5	2.5	3.2	1.3	.2	.1						7.9	8.2
E	1.4	3.9	5.1	1.6	.1							12.2	7.3
ESE	1.0	2.3	2.5	.2								6.1	6.2
SE	.8	1.8	1.6	.5								4.7	6.2
SSE	1.5	1.8	1.1	.6	.1							5.1	6.2
S	1.4	2.7	2.1	.9	.1							7.2	6.8
SSW	.9	2.1	1.4	.7	.2	.0						5.3	7.2
SW	1.2	1.6	.5	.4	.0							3.7	5.3
WSW	1.5	2.4	.6	.2								4.7	4.8
W	1.8	2.8	1.1	.2	.0							6.0	5.0
WNW	1.0	2.0	.9	.3	.0	.1	.0					4.4	6.6
NW	.9	1.2	.6	.5	.0	.0						3.4	6.8
NNW	.6	1.2	.8	.4	.0	.1						3.1	7.2
VARBL													
CALM												13.4	
	16.8	33.5	25.3	9.2	1.2	.5	.0					100.0	5.7

TOTAL NUMBER OF OBSERVATIONS

2218

NWSD, Federal Building  
Asheville, N. C.

## PART D CEILING VERSUS VISIBILITY

This summary is a bivariate percentage frequency distribution by classes of ceiling from zero to equal to or greater than 20,000 feet and as a separate class "no ceiling", versus visibility in 16 classes from zero to equal to or greater than 10 miles. Data are derived from 3-hourly observations, and three sets of tables are presented as follows:

1. Annual - all years and all hours combined
2. By month - all years and all hours combined
3. By month - by standard 3-hour groups

Due to the cumulative nature of this presentation, it is possible to determine the percentage frequency of occurrence for any given limit of ceiling or visibility separately, or in combination of ceiling and visibility. The totals progress to the right and downward. Ceiling may be determined independently by referring to totals in the extreme right hand column. Also, visibility may be determined independently by reference to the horizontal row of totals at the bottom of the page. The percentage frequency for which the station was meeting or exceeding any given set of minima may be determined from the figure at the intersection of the appropriate ceiling column and visibility row. Several examples in the use of these tables are shown on pages 2 and 3 below.

U. S. Weather Bureau and Navy stations did not report ceilings within the range 10,000 feet and higher prior to January 1949. Summaries prepared from data for these stations using the earlier period and data subsequent to January 1949 will be modified to limit ceilings to 10,000 feet. Short periods of record prior to 1949 for these stations will be eliminated from the summary. For Air Force stations, the "no ceiling" category includes clear and scattered conditions, and ceilings above 20,000 feet for period through June 1948. Beginning in July 1948 for Air Force stations and January 1949 for USWB and U. S. Navy stations the "no ceiling" category consists of observations with less than 6/10 total sky cover and those cases where total sky cover is 6/10 or more, but not more than 1/2 of the sky cover is opaque.

# EXAMPLES FOR USE OF CEILING VERSUS VISIBILITY TABLES IN THIS TABULATION

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 0
NO CEILING													
≥ 1800													
≥ 1500					91.0								92.6
≥ 1200													
≥ 1000													
≥ 900													
≥ 800													
≥ 700													
≥ 600													
≥ 500										97.4			98.1
≥ 400													
≥ 300													
≥ 200													
≥ 100													
0					95.4		96.9			98.3			100.0

EXAMPLE # 1 Read ceiling values independently of visibility under column at right headed  $\geq 0$ .  
 For instance, from the table: Ceiling  $\geq 1500$  feet = 92.6%.

Ceiling  $\geq 500$  feet = 98.1%.

EXAMPLE # 2 Read visibilities independently of ceilings on bottom line opposite  $\geq 0$ . From the table:  
 Visibility  $\geq 3$  miles = 95.4%.  
 Visibility  $\geq 2$  miles = 96.9%.  
 Visibility  $\geq 1$  mile = 98.3%.

EXAMPLE # 3 To obtain combinations of ceiling with visibility, read figure at intersection of the two categories; i.e.: Ceiling  $\geq 1500$  feet with visibility  $\geq 3$  miles = 91.0%.

## PART D

### ADDITIONAL EXAMPLES

#### EXAMPLE # 4

Values below minimums stated in the table may be obtained by subtracting the value given in the table from 100%.  
Thus, to obtain the percentage of observations with ceiling < 1500 feet and/or visibility < 3 miles, subtract the value read from the table at the intersection, which is 91.0, from 100.0. The answer 9.0 is the percentage of observations with ceiling < 1500 feet and/or visibility < 3 miles.

Likewise, the percentage of observations with ceiling < 500 feet and/or visibility < 1 mile is 2.6, obtained by subtracting 97.4 from 100.0.

#### EXAMPLE # 5

To find the percentage of observations falling within the two categories given in example above, subtract the value read from the table for the first set of limits from the value in the table for the second set of limits. The difference will be the percentage of observations meeting the lower set of limits, but not meeting the higher set of limits.

The value 91.0 read from the table at the intersection of  $\geq 1500$  feet with  $\geq 3$  miles, subtracted from 97.4 read from the table at the intersection of  $\geq 500$  feet with  $\geq 1$  mile is equal to 6.4%. Thus; 6.4 percent of the observations meet the criteria: "ceiling  $\geq 500$  feet with visibility  $\geq 1$  mile, but  $< 3$  miles; or ceiling  $\geq 500$  feet, but  $< 1500$  feet with visibility  $\geq 1$  mile."

Since these tabulations are prepared in several ways including by month, by 3-hour groups it is possible to determine diurnal variations of ceiling and visibility limits as well as probabilities of various ceiling-visibility combinations.

# PART D

## SKY COVER

This summary is prepared from 3-hourly observations and is a percentage frequency distribution of total sky cover by tenths, plus mean sky cover, and total number of observations. It is presented in two tables as follows:

1. By month and annual - all hours and all years combined.
2. By month - by standard 3-hour groups.

NOTE: # 1: Sky cover (total cloud amount) was not reported by U. S. Services until mid 1945. Data, when available, were punched for Air Force stations beginning in 1946, but were not available for Navy stations until 1948 or 1949. Weather Bureau stations recorded total cloud amount in remarks beginning sometime in 1945, but few stations have punched data prior to 1948. This summary will, of course, be limited to period of available data.

NOTE: # 2: Some sources of punched data used for this summary report cloud amounts in oktas. These have been converted to tenths prior to summarizing, and notation is made on the form to indicate that data were originally reported in oktas. The manner of conversion is given below:

### OKTAS

0  
1  
2  
3  
4  
5  
6  
7  
8 (or obscured)

### TENTHS

0  
1  
3  
4  
5  
6  
8  
9  
10

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

JAN  
MONTH

01  
HOURS (L.S.T.)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)											
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½
NO CEILING	45.8	54.2	54.8	54.8	55.5	55.5	55.5	55.5	55.5	56.1	56.1	56.1
≥ 20000	49.7	58.1	59.4	59.4	60.0	60.0	60.0	60.0	60.0	60.7	60.7	60.7
≥ 18000	49.7	58.1	59.4	59.4	60.0	60.0	60.0	60.0	60.0	60.7	60.7	60.7
≥ 16000	49.7	58.1	59.4	59.4	60.0	60.0	60.0	60.0	60.0	60.7	60.7	60.7
≥ 14000	49.7	58.1	59.4	59.4	60.0	60.0	60.0	60.0	60.0	60.7	60.7	60.7
≥ 12000	50.3	58.7	60.0	60.0	60.7	60.7	60.7	60.7	61.3	61.3	61.3	61.3
≥ 10000	51.0	60.7	61.9	61.9	62.6	62.6	62.6	62.6	63.2	63.2	63.2	63.2
≥ 9000	51.6	61.9	63.2	63.2	63.9	63.9	63.9	63.9	64.5	64.5	64.5	64.5
≥ 8000	52.9	63.9	65.2	65.2	65.8	65.8	65.8	65.8	66.5	66.5	66.5	66.5
≥ 7000	52.9	63.9	65.2	65.2	65.8	65.8	65.8	65.8	66.5	66.5	66.5	66.5
≥ 6000	52.9	63.9	65.2	65.2	65.8	65.8	65.8	65.8	66.5	66.5	66.5	66.5
≥ 5000	53.6	64.5	66.5	66.5	67.1	67.1	67.1	67.1	67.7	67.7	67.7	67.7
≥ 4500	54.2	66.5	68.4	68.4	69.0	69.0	69.0	69.0	69.7	69.7	69.7	69.7
≥ 4000	56.8	70.3	72.3	72.3	73.6	73.6	73.6	73.6	74.2	74.2	74.2	74.2
≥ 3500	58.1	71.6	73.6	73.6	74.8	74.8	74.8	74.8	75.5	75.5	75.5	75.5
≥ 3000	58.7	72.3	74.2	74.2	75.5	75.5	75.5	75.5	76.1	76.1	76.1	76.1
≥ 2500	59.4	73.6	76.1	76.1	77.4	77.4	77.4	77.4	78.1	78.1	78.1	78.1
≥ 2000	60.0	75.5	78.1	78.1	80.0	80.0	80.0	80.0	81.3	81.3	81.3	81.3
≥ 1800	60.0	75.5	78.1	78.1	80.0	80.0	80.0	80.0	81.3	81.3	81.3	81.3
≥ 1500	60.0	76.1	79.4	79.4	81.3	81.3	81.3	81.3	82.6	82.6	82.6	82.6
≥ 1200	60.0	76.8	80.0	80.0	81.9	81.9	81.9	81.9	83.2	83.2	83.2	83.2
≥ 1000	60.0	77.4	80.7	80.7	83.9	83.9	83.9	83.9	84.5	84.5	84.5	84.5
≥ 900	60.0	77.4	80.7	80.7	83.9	83.9	83.9	83.9	84.5	84.5	84.5	84.5
≥ 800	60.0	78.7	81.9	81.9	85.2	85.2	85.2	85.2	86.5	86.5	86.5	86.5
≥ 700	60.0	78.7	81.9	81.9	85.2	85.2	85.2	85.2	86.5	86.5	86.5	86.5
≥ 600	60.0	78.7	81.9	81.9	85.2	85.2	85.2	85.2	86.5	86.5	86.5	86.5
≥ 500	60.0	78.7	81.9	81.9	85.2	85.2	85.2	85.2	86.5	86.5	86.5	86.5
≥ 400	60.0	78.7	81.9	81.9	85.2	85.2	85.2	85.2	86.5	86.5	86.5	86.5
≥ 300	60.0	78.7	81.9	81.9	85.2	85.2	85.2	85.2	86.5	86.5	86.5	86.5
≥ 200	60.0	78.7	81.9	81.9	85.2	85.2	85.2	85.2	86.5	86.5	86.5	86.5
≥ 100	60.0	78.7	81.9	81.9	85.2	85.2	85.2	85.2	86.5	86.5	86.5	86.5
0	60.0	78.7	81.9	81.9	85.2	85.2	85.2	85.2	86.5	86.5	86.5	86.5

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

JAN

STATION

STATION NAME

YEARS

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

04  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ ¾	≥ ½
NO CEILING	39.4	47.1	48.4	49.0	49.7	49.7	49.7	49.7	49.7	49.7	49.7
≥ 20000	43.2	51.6	52.9	53.6	54.2	54.2	54.2	54.2	54.2	54.2	54.2
≥ 18000	43.2	51.6	52.9	53.6	54.2	54.2	54.2	54.2	54.2	54.2	54.2
≥ 16000	43.2	51.6	52.9	53.6	54.2	54.2	54.2	54.2	54.2	54.2	54.2
≥ 14000	43.2	51.6	52.9	53.6	54.2	54.2	54.2	54.2	54.2	54.2	54.2
≥ 12000	45.2	53.6	54.8	55.5	56.1	56.1	56.1	56.1	56.1	56.1	56.1
≥ 10000	48.4	56.8	58.1	59.4	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 9000	48.4	56.8	58.1	59.4	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 8000	50.3	60.0	61.9	63.2	63.9	63.9	64.5	64.5	64.5	64.5	64.5
≥ 7000	51.0	60.7	62.6	63.9	64.5	64.5	65.2	65.2	65.2	65.2	65.2
≥ 6000	51.6	61.3	63.2	64.5	65.2	65.2	66.5	66.5	66.5	66.5	66.5
≥ 5000	51.6	62.6	64.5	65.8	66.5	66.5	67.7	67.7	67.7	67.7	67.7
≥ 4500	52.9	65.8	67.7	69.0	69.7	69.7	71.0	71.0	71.0	71.0	71.0
≥ 4000	54.8	67.7	69.7	71.0	71.6	71.6	73.6	73.6	73.6	73.6	73.6
≥ 3500	56.8	70.3	72.3	73.6	74.2	74.2	76.1	76.1	76.1	76.1	76.1
≥ 3000	58.7	72.3	74.2	75.5	76.8	76.8	78.7	78.7	78.7	78.7	78.7
≥ 2500	58.7	72.9	75.5	76.8	78.1	78.1	80.0	80.0	80.0	80.0	80.0
≥ 2000	59.4	73.6	77.4	78.7	80.0	80.0	81.9	81.9	82.6	82.6	82.6
≥ 1800	59.4	73.6	77.4	78.7	80.0	80.0	81.9	81.9	82.6	82.6	82.6
≥ 1500	59.4	73.6	77.4	79.4	80.7	80.7	82.6	82.6	83.2	83.2	83.2
≥ 1200	59.4	73.6	77.4	79.4	80.7	80.7	82.6	82.6	83.2	83.2	83.2
≥ 1000	59.4	74.2	79.4	81.3	82.6	82.6	85.2	85.2	85.8	85.8	85.8
≥ 900	59.4	74.2	79.4	81.3	82.6	82.6	85.2	85.2	85.8	85.8	85.8
≥ 800	59.4	74.8	80.0	81.9	83.2	83.2	86.5	87.1	87.1	88.4	88.4
≥ 700	59.4	74.8	80.0	81.9	83.2	83.2	86.5	87.1	87.1	88.4	88.4
≥ 600	59.4	74.8	80.0	81.9	84.5	84.5	87.7	89.0	89.0	90.3	90.3
≥ 500	59.4	74.8	80.0	81.9	84.5	84.5	87.7	89.0	89.0	90.3	90.3
≥ 400	59.4	75.5	80.7	82.6	85.2	85.2	88.4	89.7	89.7	91.0	91.0
≥ 300	59.4	75.5	81.3	83.2	85.8	85.8	89.0	91.0	91.0	91.6	91.6
≥ 200	59.4	75.5	81.3	83.2	85.8	85.8	89.0	92.3	92.3	92.9	92.9
≥ 100	59.4	75.5	81.3	83.2	85.8	85.8	89.0	92.3	92.3	94.2	94.2
0	59.4	75.5	81.3	83.2	85.8	85.8	89.0	92.3	92.3	94.2	94.2

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

TEARS

JAN  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

07  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 0
NO CEILING	34.8	42.6	43.2	43.2	44.5	44.5	45.2	45.2	45.2	45.8	45.8	45.8	45.8
≥ 20000	37.4	45.2	45.8	45.5	47.7	47.7	48.4	48.4	48.4	49.0	49.0	49.0	49.0
≥ 18000	37.4	45.2	45.8	46.5	47.7	47.7	48.4	48.4	48.4	49.0	49.0	49.0	49.0
≥ 16000	37.4	45.2	45.8	46.5	47.7	47.7	48.4	48.4	48.4	49.0	49.0	49.0	49.0
≥ 14000	37.4	45.2	45.8	46.5	47.7	47.7	48.4	48.4	48.4	49.0	49.0	49.0	49.0
≥ 12000	37.4	45.2	45.8	46.5	47.7	47.7	48.4	48.4	48.4	49.0	49.0	49.0	49.0
≥ 10000	40.0	49.0	50.3	51.0	52.3	52.3	52.9	52.9	52.9	53.6	53.6	53.6	53.6
≥ 9000	40.0	49.0	50.3	51.0	52.3	52.3	52.9	52.9	52.9	53.6	53.6	53.6	53.6
≥ 8000	43.2	54.8	56.8	58.1	59.4	59.4	60.7	60.7	60.7	61.3	61.3	61.3	61.3
≥ 7000	43.2	54.8	56.8	58.1	59.4	59.4	60.7	60.7	60.7	61.3	61.3	61.3	61.3
≥ 6000	44.5	56.1	58.7	60.0	61.3	61.3	62.6	62.6	62.6	63.2	63.2	63.2	63.2
≥ 5000	45.2	56.8	59.4	60.7	61.9	62.6	63.9	63.9	63.9	64.5	64.5	64.5	64.5
≥ 4500	45.8	59.4	61.9	63.9	65.2	65.8	67.1	67.1	67.1	67.7	67.7	67.7	67.7
≥ 4000	48.4	61.9	64.5	66.5	67.7	68.4	69.7	69.7	69.7	70.3	70.3	70.3	70.3
≥ 3500	49.0	62.6	65.2	67.7	69.0	69.7	71.0	71.0	71.0	71.6	72.3	72.3	72.3
≥ 3000	51.6	66.5	69.7	72.9	74.2	74.6	76.1	76.1	76.1	76.8	77.4	77.4	77.4
≥ 2500	52.3	68.4	71.6	74.8	76.8	77.4	78.7	78.7	78.7	79.4	80.0	80.0	80.0
≥ 2000	52.9	70.3	73.6	77.4	79.4	80.0	81.3	81.3	81.3	81.9	82.6	82.6	82.6
≥ 1800	52.9	70.3	73.6	77.4	79.4	80.0	81.3	81.3	81.3	81.9	82.6	82.6	82.6
≥ 1500	52.9	70.3	73.6	78.1	80.0	80.7	81.9	81.9	81.9	82.6	83.2	83.2	83.2
≥ 1200	52.9	71.0	74.2	78.7	80.7	81.3	82.6	82.6	82.6	83.2	83.9	83.9	83.9
≥ 1000	52.9	71.0	74.2	78.7	80.7	81.3	83.9	83.9	83.9	84.5	85.2	85.2	85.2
≥ 900	52.9	71.0	74.2	78.7	80.7	81.3	83.9	83.9	83.9	84.5	85.2	85.2	85.2
≥ 800	52.9	71.0	74.2	78.7	80.7	81.3	85.2	85.2	85.2	85.8	86.5	86.5	86.5
≥ 700	52.9	71.0	74.2	78.7	80.7	81.3	85.8	85.8	85.8	86.5	87.1	87.1	87.1
≥ 600	52.9	71.0	74.2	78.7	80.7	81.3	86.5	86.5	86.5	87.1	87.7	87.7	87.7
≥ 500	52.9	71.0	74.8	79.4	81.9	82.6	88.4	88.4	88.4	89.7	89.7	89.7	89.7
≥ 400	52.9	71.0	74.8	80.0	82.6	83.2	89.7	90.3	90.3	91.6	92.3	92.3	92.3
≥ 300	52.9	71.0	74.8	80.0	82.6	83.2	89.7	91.0	91.0	92.3	92.9	92.9	92.9
≥ 200	52.9	71.0	74.8	80.0	82.6	83.2	90.3	91.6	91.6	92.9	94.8	94.8	94.8
≥ 100	52.9	71.0	74.8	80.0	82.6	83.2	90.3	92.3	92.3	94.8	96.8	96.8	96.8
0	52.9	71.0	74.8	80.0	82.6	83.2	90.3	92.3	92.3	94.8	97.4	97.4	97.4

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

JAN  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

10  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾
NO CEILING	32.9	45.8	46.5	46.5	48.4	49.7	49.7	49.7	49.7	49.7	49.7
≥ 20000	36.8	51.6	52.9	52.9	55.5	56.8	56.8	56.8	56.8	56.8	56.8
≥ 18000	36.8	51.6	52.9	52.9	55.5	56.8	56.8	56.8	56.8	56.8	56.8
≥ 16000	36.8	51.6	52.9	52.9	55.5	56.8	56.8	56.8	56.8	56.8	56.8
≥ 14000	37.4	52.3	53.6	53.6	56.1	57.4	57.4	57.4	57.4	57.4	57.4
≥ 12000	37.4	52.3	53.6	53.6	56.8	58.1	58.1	58.1	58.1	58.1	58.1
≥ 10000	39.4	54.8	57.4	57.4	60.7	61.9	62.6	62.6	62.6	62.6	62.6
≥ 9000	39.4	54.8	57.4	57.4	60.7	61.9	62.6	62.6	62.6	62.6	62.6
≥ 8000	39.4	57.4	60.0	61.3	65.2	67.1	67.7	67.7	67.7	67.7	67.7
≥ 7000	39.4	57.4	60.0	61.3	65.2	67.1	67.7	67.7	67.7	67.7	67.7
≥ 6000	39.4	58.7	61.3	62.6	66.5	68.4	69.0	69.0	69.0	69.0	69.0
≥ 5000	39.4	59.4	61.9	63.2	67.1	69.0	69.7	69.7	69.7	69.7	69.7
≥ 4500	39.4	60.0	63.2	64.5	69.0	71.0	71.6	71.6	71.6	71.6	71.6
≥ 4000	40.0	61.3	64.5	66.5	71.0	72.9	74.2	74.2	74.2	74.2	74.2
≥ 3500	41.3	62.6	66.5	68.4	72.9	74.8	76.1	76.1	76.1	76.1	76.1
≥ 3000	41.9	65.2	69.0	71.0	75.5	77.4	78.7	78.7	78.7	78.7	78.7
≥ 2500	41.9	65.2	69.0	71.0	76.1	78.1	80.0	80.0	80.0	80.0	80.0
≥ 2000	41.9	65.8	69.7	71.6	76.8	78.7	80.7	80.7	80.7	80.7	80.7
≥ 1800	41.9	65.8	69.7	71.6	77.4	79.4	81.3	81.3	81.3	81.3	81.3
≥ 1500	41.9	65.8	70.3	72.3	78.1	81.3	83.2	83.2	83.2	83.2	83.2
≥ 1200	41.9	65.8	70.3	72.3	78.1	81.3	83.2	83.2	83.2	83.2	83.2
≥ 1000	41.9	65.8	70.3	72.3	78.1	81.3	83.2	83.2	83.2	83.2	83.2
≥ 900	41.9	65.8	70.3	73.6	79.4	82.6	84.5	84.5	84.5	84.5	84.5
≥ 800	41.9	65.8	70.3	73.6	80.7	83.9	85.8	85.8	85.8	85.8	85.8
≥ 700	41.9	65.8	70.3	73.6	80.7	83.9	85.8	85.8	85.8	85.8	85.8
≥ 600	41.9	66.5	71.6	74.8	81.9	85.2	87.1	87.1	87.1	87.1	87.1
≥ 500	41.9	66.5	71.6	75.5	82.6	85.8	87.7	87.7	87.7	87.7	87.7
≥ 400	41.9	66.5	71.6	75.5	83.2	86.4	90.3	90.3	90.3	90.3	90.3
≥ 300	41.9	66.5	71.6	76.1	83.9	89.0	91.0	91.0	91.0	91.0	91.0
≥ 200	41.9	66.5	71.6	76.1	83.9	89.0	91.0	91.0	91.0	91.0	91.0
≥ 100	41.9	66.5	71.6	76.1	83.9	89.0	91.0	91.0	91.0	91.0	91.0
0	41.9	66.5	71.6	76.1	83.9	89.0	91.0	91.0	91.0	91.0	91.0

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JAN

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

13

HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 0
NO CEILING	25.8	35.5	38.7	38.1	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7
≥ 20000	30.3	42.6	47.1	47.1	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7
≥ 18000	31.0	43.2	47.7	47.7	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4
≥ 16000	31.0	43.2	47.7	47.7	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4
≥ 14000	31.6	43.9	48.4	49.0	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7
≥ 12000	34.2	46.5	51.6	52.3	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
≥ 10000	34.8	48.4	54.2	54.8	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1
≥ 9000	35.5	49.0	54.8	55.5	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 8000	36.1	52.3	59.4	60.7	61.9	62.6	63.2	63.2	63.2	63.2	63.2	63.2	63.2
≥ 7000	36.1	52.3	59.4	60.7	61.9	62.6	63.2	63.2	63.2	63.2	63.2	63.2	63.2
≥ 6000	36.8	54.2	61.3	62.6	63.9	64.5	65.2	65.2	65.2	65.2	65.2	65.2	65.2
≥ 5000	36.8	54.8	61.9	63.2	64.5	65.2	65.8	65.8	65.8	65.8	65.8	65.8	65.8
≥ 4500	36.8	54.8	62.6	64.5	65.8	66.5	67.1	67.1	67.1	67.1	67.1	67.1	67.1
≥ 4000	36.8	56.1	63.9	65.8	67.1	67.7	68.4	68.4	68.4	68.4	68.4	68.4	68.4
≥ 3500	39.4	60.0	67.7	69.7	71.0	71.6	72.3	72.3	72.3	72.3	72.3	72.3	72.3
≥ 3000	40.0	64.5	72.3	74.2	75.5	76.1	76.8	76.8	76.8	76.8	76.8	76.8	76.8
≥ 2500	41.9	66.5	74.2	76.8	78.1	78.7	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 2000	42.6	67.7	76.1	79.4	80.7	81.3	81.9	81.9	81.9	81.9	81.9	81.9	81.9
≥ 1800	43.2	68.4	76.8	80.0	81.3	81.9	82.6	82.6	82.6	82.6	82.6	82.6	82.6
≥ 1500	43.9	69.0	77.4	81.3	83.9	84.5	85.8	85.8	85.8	85.8	85.8	85.8	85.8
≥ 1200	43.9	69.0	77.4	81.3	83.9	84.5	85.8	85.8	85.8	85.8	85.8	85.8	85.8
≥ 1000	43.9	69.7	78.7	82.6	85.8	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 900	43.9	69.7	78.7	82.6	85.8	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 800	43.9	70.3	79.4	83.2	87.1	87.7	89.0	89.0	89.0	89.0	89.0	89.0	89.0
≥ 700	43.9	70.3	79.4	83.2	87.1	87.7	89.0	89.0	89.0	89.0	89.0	89.0	89.0
≥ 600	43.9	70.3	80.0	83.9	87.7	89.0	91.6	91.6	91.6	91.6	91.6	91.6	91.6
≥ 500	43.9	70.3	80.7	84.5	88.4	90.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3
≥ 400	43.9	71.0	81.3	85.2	89.0	92.3	94.2	94.2	94.2	94.2	94.2	94.2	94.2
≥ 300	43.9	71.0	81.3	85.2	89.0	92.3	94.2	94.2	94.2	94.2	94.2	94.2	94.2
≥ 200	43.9	71.0	81.3	85.2	89.0	92.3	94.2	94.2	94.2	94.2	94.2	94.2	94.2
≥ 100	43.9	71.0	81.3	85.2	89.0	92.3	94.2	94.2	94.2	94.2	94.2	94.2	94.2
0	43.9	71.0	81.3	85.2	89.0	92.3	94.2	94.2	94.2	94.2	94.2	94.2	94.2

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

JAN  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

16  
HOURS (L S T)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 0
NO CEILING	31.6	44.5	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
≥ 20000	34.8	49.7	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3
≥ 18000	34.8	49.7	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3
≥ 16000	34.8	49.7	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3
≥ 14000	36.1	51.6	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2
≥ 12000	37.4	53.6	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1
≥ 10000	38.1	56.1	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4
≥ 9000	38.1	57.4	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7
≥ 8000	39.4	62.6	66.5	67.1	67.1	67.1	67.1	67.1	67.1	67.1	67.1	67.1	67.1
≥ 7000	39.4	62.6	66.5	67.1	67.1	67.1	67.1	67.1	67.1	67.1	67.1	67.1	67.1
≥ 6000	40.0	63.9	67.7	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0
≥ 5000	41.3	65.8	69.7	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0
≥ 4500	41.3	66.5	70.3	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6
≥ 4000	41.3	67.1	71.6	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2
≥ 3500	41.3	69.7	74.2	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8
≥ 3000	43.2	72.9	78.1	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7
≥ 2500	43.9	73.6	79.4	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9
≥ 2000	43.9	76.1	82.6	85.8	86.5	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1
≥ 1800	43.9	76.1	82.6	85.8	86.5	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1
≥ 1500	43.9	76.1	83.2	86.5	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1
≥ 1200	43.9	76.8	83.9	87.7	88.4	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0
≥ 1000	43.9	76.8	83.9	87.7	89.0	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7
≥ 900	43.9	76.8	83.9	87.7	89.0	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7
≥ 800	43.9	76.8	83.9	87.7	89.0	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7
≥ 700	43.9	77.4	84.5	88.4	89.7	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0
≥ 600	43.9	77.4	84.5	89.0	90.3	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6
≥ 500	43.9	77.4	84.5	89.0	90.3	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6
≥ 400	43.9	77.4	84.5	89.0	91.0	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9
≥ 300	43.9	77.4	84.5	89.0	91.0	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9
≥ 200	43.9	77.4	84.5	89.0	91.0	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9
≥ 100	43.9	77.4	84.5	89.0	91.0	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9
0	43.9	77.4	84.5	89.0	91.0	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JAN  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

19  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)											
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ 5/16
NO CEILING	43.2	52.3	52.9	53.6	53.6	54.2	54.2	54.2	54.2	54.2	54.2	54.2
≥ 20000	45.2	56.1	56.8	57.4	57.4	58.1	58.1	58.1	58.1	58.1	58.1	58.1
≥ 18000	45.2	56.1	56.8	57.4	57.4	58.1	58.1	58.1	58.1	58.1	58.1	58.1
≥ 16000	45.2	56.1	56.8	57.4	57.4	58.1	58.1	58.1	58.1	58.1	58.1	58.1
≥ 14000	45.8	56.8	57.4	58.1	58.1	58.7	58.7	58.7	58.7	58.7	58.7	58.7
≥ 12000	47.7	60.0	60.7	61.3	61.3	61.9	61.9	61.9	61.9	61.9	61.9	61.9
≥ 10000	51.0	63.9	64.5	65.2	65.2	65.8	65.8	65.8	65.8	65.8	65.8	65.8
≥ 9000	51.0	63.9	64.5	65.2	65.2	65.8	65.8	65.8	65.8	65.8	65.8	65.8
≥ 8000	51.0	65.2	65.8	66.5	66.5	67.1	67.1	67.1	67.1	67.1	67.1	67.1
≥ 7000	51.0	65.2	65.8	66.5	66.5	67.1	67.1	67.1	67.1	67.1	67.1	67.1
≥ 6000	51.0	65.8	66.5	67.1	67.1	67.7	67.7	67.7	67.7	67.7	67.7	67.7
≥ 5000	52.3	67.7	68.4	69.0	69.0	69.7	69.7	69.7	69.7	69.7	69.7	69.7
≥ 4500	53.6	69.7	70.3	71.0	71.6	72.3	72.3	72.3	72.3	72.3	72.3	72.3
≥ 4000	54.8	71.0	72.3	72.9	73.6	74.2	74.2	74.2	74.2	74.2	74.2	74.2
≥ 3500	56.1	72.9	73.6	74.2	74.8	75.5	75.5	75.5	75.5	75.5	75.5	75.5
≥ 3000	56.1	72.9	74.8	75.5	76.1	77.4	77.4	77.4	77.4	77.4	77.4	77.4
≥ 2500	56.1	76.1	78.1	78.7	79.4	80.7	81.3	81.3	81.3	81.3	81.3	81.3
≥ 2000	58.7	77.4	79.4	80.0	80.7	81.9	83.2	83.2	83.2	83.2	83.2	83.2
≥ 1800	58.7	77.4	79.4	80.0	80.7	81.9	83.2	83.2	83.2	83.2	83.2	83.2
≥ 1500	58.7	77.4	79.4	80.0	81.3	82.6	83.9	84.5	84.5	84.5	84.5	84.5
≥ 1200	58.7	77.4	79.4	80.0	81.3	82.6	83.9	84.5	84.5	84.5	84.5	84.5
≥ 1000	58.7	78.7	81.9	82.6	83.9	85.2	87.1	87.7	87.7	87.7	87.7	87.7
≥ 900	58.7	79.4	82.6	83.2	84.5	85.8	87.7	88.4	88.4	88.4	88.4	88.4
≥ 800	58.7	80.0	83.2	83.9	85.8	87.1	89.7	90.3	90.3	90.3	90.3	90.3
≥ 700	58.7	80.0	83.9	84.5	86.5	87.7	91.0	91.6	91.6	91.6	91.6	91.6
≥ 600	58.7	80.0	83.9	85.2	87.1	88.4	91.6	92.3	92.3	92.3	92.3	92.3
≥ 500	58.7	80.0	83.9	85.8	88.4	89.7	92.9	93.6	94.8	94.8	94.8	94.8
≥ 400	58.7	80.7	84.5	86.5	89.0	90.3	93.6	94.2	94.8	96.1	96.8	97.4
≥ 300	58.7	80.7	84.5	86.5	89.0	90.3	93.6	94.8	95.5	97.4	98.1	98.7
≥ 200	58.7	80.7	84.5	86.5	89.0	90.3	93.6	94.8	95.5	97.4	98.1	98.7
≥ 100	58.7	80.7	84.5	86.5	89.0	90.3	93.6	94.8	95.5	98.1	98.7	99.4
0	58.7	80.7	84.5	86.5	89.0	90.3	93.6	94.8	95.5	98.1	98.7	100.0

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

## CEILING VERSUS VISIBILITY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

STATION NAME

73-77

YEARS

JAN  
MONTH

22

HOURS (LST)

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ 5/16	≥ ¼
NO CEILING	42.6	49.7	51.0	51.0	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
≥ 20000	48.4	56.1	57.4	57.4	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1
≥ 18000	48.4	56.1	57.4	57.4	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1
≥ 16000	48.4	56.1	57.4	57.4	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1
≥ 14000	48.4	56.1	57.4	57.4	58.1	58.1	58.7	58.7	58.7	58.7	58.7	58.7	58.7
≥ 12000	49.0	57.4	58.7	58.7	59.4	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 10000	52.3	61.9	63.2	63.2	63.9	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5
≥ 9000	52.9	62.6	63.9	63.9	64.5	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2
≥ 8000	54.2	64.5	65.8	65.8	66.5	67.1	67.1	67.1	67.1	67.1	67.1	67.1	67.1
≥ 7000	54.8	65.2	66.5	66.5	67.1	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7
≥ 6000	55.5	65.8	67.1	67.1	68.4	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0
≥ 5000	56.1	67.1	68.4	68.4	69.7	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3
≥ 4500	56.8	68.4	69.7	69.7	71.0	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6
≥ 4000	58.7	70.3	72.3	72.3	73.6	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2
≥ 3500	60.7	73.6	75.5	75.5	76.8	77.4	77.4	77.4	77.4	77.4	77.4	77.4	77.4
≥ 3000	61.9	75.5	78.1	78.1	79.4	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
≥ 2500	62.6	76.8	79.4	79.4	80.7	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9
≥ 2000	63.2	78.1	80.7	81.3	82.6	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
≥ 1800	63.2	78.1	80.7	81.3	82.6	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
≥ 1500	63.2	78.1	80.7	81.3	82.6	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
≥ 1200	63.2	78.7	81.3	81.9	83.2	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5
≥ 1000	63.2	80.0	82.6	83.9	86.5	87.7	87.7	88.4	88.4	88.4	88.4	89.0	89.0
≥ 900	63.2	80.0	82.6	83.9	86.5	87.7	87.7	89.0	89.0	89.0	89.0	89.7	89.7
≥ 800	63.2	80.0	82.6	83.9	87.7	89.0	89.0	90.3	90.3	90.3	90.3	91.0	91.0
≥ 700	63.2	80.0	82.6	83.9	87.7	89.0	89.0	90.3	90.3	90.3	90.3	91.0	91.0
≥ 600	63.2	80.0	82.6	84.5	88.4	89.7	89.7	91.0	91.0	91.0	91.0	91.6	91.6
≥ 500	63.2	80.0	82.6	84.5	88.4	89.7	90.3	92.3	92.3	92.3	92.3	92.9	92.9
≥ 400	63.2	80.0	82.6	84.5	88.4	90.3	91.0	92.9	92.9	92.9	94.2	94.8	95.5
≥ 300	63.2	80.0	82.6	84.5	89.0	91.0	91.6	94.2	94.2	94.8	96.1	96.8	97.4
≥ 200	63.2	80.0	82.6	84.5	89.0	91.0	91.6	94.8	94.8	96.1	97.4	98.1	98.7
≥ 100	63.2	80.0	82.6	84.5	89.0	91.0	91.6	94.8	94.8	96.8	98.1	98.7	99.4
≥ 0	63.2	80.0	82.6	84.5	89.0	91.0	91.6	94.8	94.8	96.8	98.1	98.7	99.4

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

## CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

JAN

STATION NAME

STATION NAME

YEARS

MONTH

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

ALL

HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	37.0	46.5	47.7	47.9	48.6	48.9	49.0	49.0	49.0	49.1	49.1	49.1	49.1	49.1
≥ 20000	40.7	51.4	53.1	53.3	54.1	54.4	54.4	54.4	54.4	54.6	54.6	54.6	54.6	54.6
≥ 18000	40.8	51.5	53.2	53.4	54.2	54.4	54.5	54.5	54.5	54.7	54.7	54.7	54.7	54.7
≥ 16000	40.8	51.5	53.2	53.4	54.2	54.4	54.5	54.5	54.5	54.7	54.7	54.7	54.7	54.7
≥ 14000	41.2	51.9	53.6	54.0	54.8	55.1	55.2	55.2	55.2	55.3	55.3	55.3	55.3	55.3
≥ 12000	42.3	53.4	55.2	55.5	56.4	56.7	56.8	56.8	56.8	56.9	56.9	56.9	56.9	56.9
≥ 10000	44.4	56.5	58.6	59.0	60.0	60.3	60.5	60.5	60.5	60.7	60.7	60.7	60.7	60.7
≥ 9000	44.6	56.9	59.1	59.5	60.5	60.8	61.0	61.0	61.0	61.1	61.1	61.1	61.1	61.1
≥ 8000	45.8	60.1	62.7	63.5	64.5	65.0	65.4	65.4	65.4	65.6	65.6	65.6	65.6	65.6
≥ 7000	46.0	60.2	62.8	63.6	64.7	65.2	65.6	65.6	65.6	65.7	65.7	65.7	65.7	65.7
≥ 6000	46.5	61.2	63.9	64.8	65.9	66.4	66.9	66.9	66.9	67.0	67.0	67.0	67.0	67.0
≥ 5000	47.0	62.3	65.1	66.0	67.1	67.7	68.2	68.2	68.2	68.4	68.5	68.5	68.5	68.5
≥ 4500	47.6	63.9	66.8	67.8	69.1	69.8	70.2	70.3	70.3	70.5	70.6	70.6	70.6	70.6
≥ 4000	49.0	65.7	68.9	70.2	71.5	72.2	72.8	72.9	72.9	73.1	73.2	73.2	73.2	73.2
≥ 3500	50.3	67.8	71.1	72.4	73.8	74.4	75.1	75.2	75.2	75.3	75.3	75.3	75.3	75.3
≥ 3000	51.5	70.2	73.8	75.2	76.7	77.5	78.2	78.2	78.2	78.4	78.6	78.6	78.6	78.6
≥ 2500	52.3	71.6	75.4	76.9	78.6	79.4	80.2	80.3	80.3	80.5	80.7	80.7	80.7	80.7
≥ 2000	52.8	73.1	77.2	79.0	80.8	81.7	82.6	82.7	82.7	83.0	83.2	83.2	83.2	83.2
≥ 1800	52.9	73.2	77.3	79.2	81.1	81.9	82.8	83.0	83.0	83.2	83.4	83.4	83.4	83.4
≥ 1500	53.0	73.3	77.7	79.8	81.9	83.0	84.0	84.2	84.2	84.5	84.7	84.8	84.8	84.8
≥ 1200	53.0	73.6	78.0	80.2	82.3	83.4	84.4	84.6	84.6	84.9	85.1	85.2	85.2	85.2
≥ 1000	53.0	74.2	79.0	81.3	83.8	84.9	86.5	86.8	86.8	87.2	87.4	87.7	87.7	87.7
≥ 900	53.0	74.3	79.0	81.5	84.0	85.2	86.7	87.1	87.1	87.5	87.7	88.0	88.1	88.1
≥ 800	53.0	74.7	79.4	81.9	84.9	86.1	88.0	88.5	88.5	89.0	89.3	89.7	89.8	89.8
≥ 700	53.0	74.8	79.6	82.1	85.1	86.3	88.5	89.0	89.0	89.5	89.8	90.2	90.4	90.4
≥ 600	53.0	74.8	79.8	82.6	85.7	87.1	89.5	90.1	90.1	90.7	91.1	91.5	91.7	91.7
≥ 500	53.0	74.8	80.0	82.9	86.2	87.6	90.2	90.8	90.8	91.5	92.3	92.8	93.1	93.1
≥ 400	53.0	75.1	80.2	83.2	86.7	88.6	91.4	92.1	92.1	93.0	94.0	94.7	95.0	95.0
≥ 300	53.0	75.1	80.3	83.4	86.9	89.0	91.9	93.0	93.0	94.0	95.2	96.0	96.3	96.3
≥ 200	53.0	75.1	80.3	83.4	87.0	89.0	92.3	93.6	93.6	94.7	96.2	97.1	97.3	97.4
≥ 100	53.0	75.1	80.3	83.5	87.1	89.1	92.3	93.9	93.9	95.2	96.9	98.3	99.0	99.4
0	53.0	75.1	80.3	83.5	87.1	89.1	92.3	93.9	93.9	95.2	96.9	98.4	99.2	100.0

TOTAL NUMBER OF OBSERVATIONS

1240

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

FEB  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

01  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ ¾	≥ 0
NO CEILING	48.9	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 20000	51.8	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
18000	51.8	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
16000	51.8	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
14000	51.8	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
12000	52.5	59.6	59.6	59.6	59.6	59.6	59.6	59.6	59.6	59.6	59.6
10000	55.3	65.3	65.3	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0
9000	55.3	65.3	65.3	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0
8000	57.5	68.1	68.1	68.8	68.8	68.8	69.5	69.5	69.5	69.5	69.5
7000	57.5	68.1	68.1	68.8	68.8	68.8	69.5	69.5	69.5	69.5	69.5
6000	58.2	68.8	68.8	69.5	69.5	69.5	70.2	70.2	70.2	70.2	70.2
5000	60.3	70.9	70.9	71.6	71.6	71.6	72.3	72.3	72.3	72.3	72.3
4500	61.7	73.1	73.1	74.5	74.5	74.5	75.2	75.2	75.2	75.2	75.2
4000	64.5	75.9	75.9	77.3	78.0	78.0	78.7	78.7	78.7	78.7	78.7
3500	66.0	77.3	77.3	78.7	79.4	79.4	80.1	80.1	80.1	80.1	80.1
3000	68.1	80.9	80.9	82.3	83.0	83.0	83.7	83.7	83.7	83.7	83.7
2500	68.1	80.9	80.9	83.0	83.7	83.7	84.4	84.4	84.4	84.4	84.4
2000	68.8	81.6	81.6	83.7	84.4	84.4	85.8	85.8	85.8	85.8	85.8
1800	68.8	81.6	81.6	83.7	84.4	84.4	85.8	85.8	85.8	85.8	85.8
1500	68.8	81.6	81.6	83.7	85.1	85.1	87.2	87.2	87.2	87.2	87.2
1200	68.8	82.3	82.3	84.4	85.8	85.8	87.9	87.9	87.9	87.9	87.9
1000	69.5	83.7	83.7	86.5	88.7	88.7	90.8	90.8	90.8	90.8	90.8
900	69.5	83.7	83.7	86.5	88.7	88.7	90.8	90.8	90.8	90.8	90.8
800	69.5	84.4	84.4	87.2	89.4	89.4	91.5	91.5	91.5	91.5	91.5
700	69.5	84.4	84.4	87.2	89.4	89.4	91.5	91.5	91.5	91.5	91.5
600	69.5	84.4	84.4	87.2	89.4	89.4	91.5	91.5	91.5	91.5	91.5
500	69.5	84.4	84.4	87.2	89.4	89.4	91.5	91.5	91.5	91.5	91.5
400	69.5	84.4	84.4	87.2	89.4	89.4	91.5	91.5	91.5	91.5	91.5
300	69.5	84.4	84.4	87.2	89.4	89.4	91.5	91.5	91.5	91.5	91.5
200	69.5	84.4	84.4	87.2	89.4	89.4	91.5	91.5	91.5	91.5	91.5
100	69.5	84.4	84.4	87.2	89.4	89.4	91.5	91.5	91.5	91.5	91.5
0	69.5	84.4	84.4	87.2	89.4	89.4	91.5	91.5	91.5	91.5	91.5

TOTAL NUMBER OF OBSERVATIONS

141

DIRNAVOCEANMET SMOS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

FEB  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

04  
HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	47.5	53.2	53.9	53.9	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6
≥ 20000	48.9	55.3	56.0	56.0	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 18000	48.9	55.3	56.0	56.0	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 16000	48.9	55.3	56.0	56.0	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 14000	48.9	55.3	56.0	56.0	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 12000	48.9	55.3	56.0	56.0	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 10000	52.5	61.0	61.7	61.7	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
≥ 9000	53.2	61.7	62.4	62.4	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1
≥ 8000	56.7	65.3	66.0	66.0	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7
≥ 7000	57.5	66.0	66.7	66.7	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4
≥ 6000	58.9	67.4	68.1	68.1	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8
≥ 5000	58.9	67.4	68.1	68.1	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8
≥ 4500	60.3	70.2	71.6	71.6	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3
≥ 4000	63.1	75.2	76.6	76.6	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3
≥ 3500	64.5	76.6	78.7	78.7	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 3000	66.0	78.0	80.1	80.1	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3
≥ 2500	67.4	80.9	83.0	83.0	85.1	85.1	85.1	85.1	85.1	85.1	85.1	85.1	85.1
≥ 2000	68.1	81.6	83.7	83.7	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
≥ 1800	68.1	81.6	83.7	83.7	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
≥ 1500	68.1	82.3	84.4	84.4	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2
≥ 1200	68.1	83.7	85.8	85.8	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
≥ 1000	68.1	83.7	85.8	85.8	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
≥ 900	68.1	83.7	85.8	85.8	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
≥ 800	68.1	84.4	86.5	86.5	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4
≥ 700	68.1	84.4	87.2	87.2	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1
≥ 600	68.1	84.4	87.2	87.2	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1
≥ 500	68.1	84.4	87.2	87.2	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1
≥ 400	68.1	84.4	87.2	87.2	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1
≥ 300	68.1	84.4	87.2	87.2	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1
≥ 200	68.1	84.4	87.2	87.2	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1
≥ 100	68.1	84.4	87.2	87.2	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1
0	68.1	84.4	87.2	87.2	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1

TOTAL NUMBER OF OBSERVATIONS

141

DIRNAVOCEANMET SMOS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

73-77

WILLOW GROVE, PENNSYLVANIA

14793

FEB

STATION NAME

YEARS

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

07  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	34.0	43.3	47.5	49.7	50.4	51.8	51.8	51.8	51.8	51.8	51.8	51.8	51.8
≥ 20000	38.3	49.7	53.9	56.0	56.7	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2
≥ 18000	38.3	49.7	53.9	56.0	56.7	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2
≥ 16000	38.3	49.7	53.9	56.0	56.7	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2
≥ 14000	38.3	50.4	54.6	56.7	57.5	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
≥ 12000	39.0	52.5	56.7	58.9	59.6	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0
≥ 10000	41.1	54.6	58.9	61.0	61.7	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1
≥ 9000	41.1	54.6	58.9	61.0	61.7	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1
≥ 8000	41.8	56.0	60.3	62.4	63.1	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5
≥ 7000	42.6	57.5	61.7	63.8	64.5	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0
≥ 6000	43.3	58.9	63.1	65.3	66.0	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4
≥ 5000	43.3	58.9	63.1	65.3	66.0	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4
≥ 4500	44.0	61.0	65.3	67.4	68.1	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5
≥ 4000	45.4	63.8	68.1	70.2	70.9	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3
≥ 3500	45.4	66.0	70.2	72.3	73.1	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5
≥ 3000	46.8	67.4	71.6	74.5	75.9	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3
≥ 2500	47.5	68.8	73.1	75.9	78.0	79.4	79.4	80.1	80.1	80.1	80.1	80.1	80.1
≥ 2000	47.5	68.8	73.8	77.3	79.4	81.6	81.6	82.3	82.3	82.3	82.3	82.3	82.3
≥ 1800	47.5	68.8	73.8	77.3	79.4	81.6	81.6	83.0	83.0	83.0	83.0	83.0	83.0
≥ 1500	47.5	68.8	73.8	77.3	79.4	81.6	81.6	83.0	83.0	83.0	83.0	83.0	83.0
≥ 1200	47.5	70.2	75.2	78.7	80.9	84.4	84.4	85.8	85.8	85.8	85.8	85.8	85.8
≥ 1000	47.5	70.2	75.2	78.7	80.9	84.4	84.4	86.5	86.5	86.5	86.5	86.5	86.5
≥ 900	48.2	70.9	75.9	79.4	81.6	85.1	85.1	87.2	87.2	87.2	87.2	87.2	87.2
≥ 800	48.2	70.9	76.6	80.9	83.0	86.5	86.5	89.4	89.4	89.4	89.4	89.4	89.4
≥ 700	48.2	70.9	76.6	80.9	83.0	86.5	86.5	89.4	89.4	89.4	89.4	89.4	89.4
≥ 600	48.2	70.9	77.3	81.6	84.4	87.9	87.9	91.5	91.5	91.5	91.5	91.5	91.5
≥ 500	48.2	70.9	77.3	81.6	84.4	87.9	87.9	91.5	91.5	91.5	91.5	91.5	91.5
≥ 400	48.2	70.9	77.3	81.6	84.4	87.9	87.9	91.5	91.5	91.5	91.5	91.5	91.5
≥ 300	48.2	70.9	78.0	82.3	85.1	88.7	88.7	92.9	92.9	92.9	92.9	92.9	92.9
≥ 200	48.2	70.9	78.0	82.3	85.1	88.7	88.7	92.9	92.9	92.9	92.9	92.9	92.9
≥ 100	48.2	70.9	78.0	82.3	85.1	88.7	88.7	92.9	92.9	92.9	92.9	92.9	92.9
≥ 0	48.2	70.9	78.0	82.3	85.1	88.7	88.7	92.9	92.9	92.9	92.9	92.9	92.9

TOTAL NUMBER OF OBSERVATIONS

141

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

FEB  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

10  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 0
NO CEILING	31.9	51.1	51.8	53.2	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6
≥ 20000	35.5	56.7	58.2	60.3	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7
≥ 18000	35.5	56.7	58.2	60.3	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7
≥ 16000	35.5	56.7	58.2	60.3	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7
≥ 14000	35.5	56.7	58.2	60.3	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7
≥ 12000	35.5	56.7	58.2	60.3	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7
≥ 10000	35.5	57.5	59.6	61.7	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1
≥ 9000	35.5	57.5	59.6	61.7	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1
≥ 8000	36.9	61.0	63.8	66.7	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1
≥ 7000	36.9	61.0	63.8	66.7	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1
≥ 6000	36.9	62.4	65.3	68.1	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5	69.5
≥ 5000	38.3	63.8	66.7	69.5	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9
≥ 4500	39.0	65.3	68.1	70.9	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3
≥ 4000	41.1	68.1	70.9	73.8	75.9	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6
≥ 3500	41.8	70.9	73.8	76.6	78.7	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 3000	41.8	71.6	74.5	77.3	79.4	80.1	80.1	80.1	80.1	80.1	80.1	80.1	80.1
≥ 2500	41.8	71.6	75.2	79.4	81.6	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3
≥ 2000	41.8	72.3	76.6	80.9	83.0	83.7	83.7	85.1	85.1	85.1	85.8	85.8	85.8
≥ 1800	41.8	72.3	76.6	80.9	83.7	84.4	84.4	85.8	85.8	85.8	86.5	86.5	86.5
≥ 1500	41.8	72.3	76.6	80.9	83.7	84.4	84.4	85.8	85.8	85.8	86.5	86.5	86.5
≥ 1200	41.8	74.5	78.7	83.0	85.8	87.2	87.2	88.7	88.7	88.7	89.4	89.4	89.4
≥ 1000	41.8	75.2	79.4	83.7	86.5	87.9	87.9	89.4	89.4	89.4	90.1	90.1	90.1
≥ 900	41.8	75.2	79.4	83.7	86.5	87.9	87.9	89.4	89.4	90.1	90.8	90.8	90.8
≥ 800	41.8	75.2	79.4	83.7	86.5	87.9	87.9	89.4	89.4	90.8	91.5	91.5	91.5
≥ 700	41.8	75.2	79.4	83.7	86.5	87.9	87.9	89.4	89.4	90.8	91.5	91.5	91.5
≥ 600	41.8	75.2	79.4	83.7	87.2	88.7	88.7	90.1	90.1	91.5	92.2	92.2	92.2
≥ 500	41.8	75.2	79.4	83.7	87.2	89.4	90.1	91.5	91.5	93.6	94.3	94.3	94.3
≥ 400	41.8	75.2	79.4	83.7	87.2	89.4	90.1	91.5	91.5	93.6	94.3	94.3	94.3
≥ 300	41.8	75.9	80.1	85.1	88.7	90.8	92.2	93.6	93.6	95.7	96.5	96.5	96.5
≥ 200	41.8	75.9	80.1	85.1	88.7	90.8	92.2	93.6	93.6	96.5	97.2	97.9	97.9
≥ 100	41.8	75.9	80.1	85.1	88.7	90.8	92.2	93.6	93.6	96.5	97.9	99.3	99.3
0	41.8	75.9	80.1	85.1	88.7	90.8	92.2	93.6	93.6	96.5	97.9	99.3	99.3

TOTAL NUMBER OF OBSERVATIONS 141

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

TEARS

FEB  
MONTH

13  
HOURS (LST)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	30.5	48.9	49.7	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4
≥ 20000	33.3	55.3	56.0	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 18000	33.3	56.0	56.7	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5
≥ 16000	33.3	56.0	56.7	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5
≥ 14000	34.0	56.7	57.5	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2
≥ 12000	34.0	56.7	58.2	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
≥ 10000	34.8	58.2	59.6	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
≥ 9000	34.8	58.2	59.6	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
≥ 8000	35.5	61.0	63.1	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8
≥ 7000	35.5	61.0	63.1	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8
≥ 6000	35.5	62.4	64.5	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0
≥ 5000	35.5	63.8	66.0	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1
≥ 4500	36.2	64.5	66.7	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8
≥ 4000	36.3	64.8	71.6	73.8	73.8	73.8	73.8	73.8	73.8	73.8	73.8	73.8	73.8	73.8
≥ 3500	39.0	69.5	72.3	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5
≥ 3000	41.1	72.3	75.2	78.0	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 2500	41.8	73.8	76.6	79.4	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
≥ 2000	41.8	73.8	77.3	80.9	83.0	83.0	83.0	83.7	83.7	83.7	83.7	83.7	83.7	83.7
≥ 1800	41.8	73.8	77.3	80.9	83.0	83.0	83.0	83.7	83.7	83.7	83.7	83.7	83.7	83.7
≥ 1500	41.8	75.2	78.7	82.3	84.4	84.4	84.4	85.8	85.8	85.8	85.8	85.8	85.8	85.8
≥ 1200	41.8	76.6	80.9	84.4	86.5	87.2	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
≥ 1000	41.8	77.3	82.3	85.8	87.9	88.7	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1
≥ 900	41.8	77.3	82.3	85.8	87.9	88.7	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1
≥ 800	41.8	78.0	83.0	86.5	88.7	90.1	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5
≥ 700	41.8	78.0	83.0	86.5	88.7	90.1	91.5	92.2	92.2	92.2	92.2	92.2	92.2	92.2
≥ 600	41.8	78.0	83.0	86.5	88.7	90.1	91.5	92.2	92.2	92.2	92.2	92.2	92.2	92.2
≥ 500	41.8	78.0	83.0	87.2	89.4	90.8	92.2	92.9	92.9	92.9	92.9	92.9	92.9	92.9
≥ 400	41.8	78.0	83.0	87.2	90.1	92.2	93.6	94.3	94.3	94.3	94.3	94.3	94.3	94.3
≥ 300	41.8	78.0	83.0	87.2	90.1	92.2	94.3	95.7	95.7	96.5	96.5	96.5	96.5	96.5
≥ 200	41.8	78.0	83.0	87.2	90.1	92.2	94.3	95.7	95.7	96.5	96.5	96.5	96.5	96.5
≥ 100	41.8	78.0	83.0	87.2	90.1	92.2	94.3	95.7	95.7	96.5	96.5	96.5	96.5	96.5
0	41.8	78.0	83.0	87.2	90.1	92.2	94.3	95.7	95.7	96.5	96.5	96.5	96.5	96.5

TOTAL NUMBER OF OBSERVATIONS

141

2

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

FEB

STATION

STATION NAME

YEARS

NORTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

16  
HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ 5/16	≥ ¼	≥ 0
NO CEILING	33.3	44.7	45.4	46.1	46.1	46.1	46.1	46.1	46.1	46.1	46.1	46.1	46.1	46.8
≥ 20000	36.2	51.8	53.9	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	55.3
≥ 18000	36.2	51.8	53.9	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	55.3
≥ 16000	36.2	51.8	53.9	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	55.3
≥ 14000	36.9	53.2	55.3	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.7
≥ 12000	37.6	53.9	56.0	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	58.2
≥ 10000	38.3	57.5	59.6	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.7
≥ 9000	38.3	57.5	59.6	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.7
≥ 8000	38.3	59.6	61.7	63.8	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	65.3
≥ 7000	38.3	60.3	62.4	64.5	64.5	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	66.0
≥ 6000	39.0	61.7	63.8	66.0	66.0	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	67.4
≥ 5000	39.0	61.7	63.8	66.0	66.0	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	67.4
≥ 4500	39.7	63.1	65.3	67.4	67.4	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.8
≥ 4000	42.6	70.2	72.3	74.5	74.5	75.2	75.2	75.2	75.2	75.2	75.2	75.2	75.2	75.9
≥ 3500	44.7	72.3	74.5	76.6	76.6	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	78.0
≥ 3000	44.7	74.5	77.3	79.4	79.4	80.1	80.1	80.1	80.1	80.1	80.1	80.1	80.1	80.9
≥ 2500	44.7	75.2	78.0	80.1	80.9	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	82.3
≥ 2000	45.4	77.3	80.1	84.4	85.1	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	86.5
≥ 1800	45.4	77.3	80.1	85.1	85.8	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	87.2
≥ 1500	45.4	78.7	82.3	87.2	87.9	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	89.1
≥ 1200	45.4	78.7	82.3	87.2	87.9	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	89.1
≥ 1000	45.4	79.4	83.0	87.9	88.7	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.8
≥ 900	45.4	79.4	83.0	87.9	88.7	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.8
≥ 800	45.4	79.4	83.0	87.9	88.7	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.8
≥ 700	45.4	79.4	83.0	87.9	88.7	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.8
≥ 600	45.4	79.4	83.0	87.9	88.7	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.8
≥ 500	45.4	79.4	83.0	87.9	88.7	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.8
≥ 400	45.4	79.4	83.0	87.9	88.7	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.8
≥ 300	45.4	79.4	83.0	87.9	88.7	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.8
≥ 200	45.4	79.4	83.0	87.9	88.7	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.8
≥ 100	45.4	79.4	83.0	87.9	88.7	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.8
≥ 0	45.4	79.4	83.0	87.9	88.7	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.8

TOTAL NUMBER OF OBSERVATIONS 141

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

## CEILING VERSUS VISIBILITY

14793  
STATIONWILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

FEB  
MONTH

19

HOURS (LST)

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	39.0	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4
≥ 20000	44.7	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
≥ 18000	44.7	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
≥ 16000	44.7	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
≥ 14000	46.1	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0
≥ 12000	46.1	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7
≥ 10000	46.1	62.4	62.4	62.4	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1
≥ 9000	46.1	62.4	62.4	62.4	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1
8000	49.7	66.7	66.7	66.7	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4
7000	51.1	68.1	68.1	68.1	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8
6000	52.5	69.5	69.5	69.5	70.2	70.2	70.2	70.2	70.2	70.2	70.2	70.2	70.2	70.2
5000	52.5	70.2	70.2	70.2	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9
4500	54.6	72.3	72.3	72.3	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1
4000	56.0	75.9	75.9	75.9	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6
3500	56.7	76.6	76.6	76.6	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3
3000	57.5	78.0	78.0	78.7	79.4	79.4	80.1	80.1	80.1	80.1	80.1	80.1	80.1	80.1
2500	58.2	78.7	79.4	80.1	80.9	80.9	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
2000	58.9	80.1	81.6	84.4	85.1	85.1	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
1800	58.9	80.1	81.6	84.4	85.1	85.1	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
1500	58.9	80.1	81.6	85.1	85.8	85.8	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5
1200	58.9	80.1	81.6	85.8	86.5	86.5	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2
1000	58.9	80.9	82.3	86.5	87.2	87.2	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
900	58.9	80.9	83.0	87.2	87.9	87.9	89.4	89.4	89.4	89.4	90.1	90.1	90.1	90.8
800	58.9	81.6	83.7	87.9	88.7	88.7	90.1	90.1	90.1	90.8	91.5	91.5	91.5	92.2
700	58.9	81.6	83.7	87.9	89.4	89.4	90.8	90.8	90.8	91.5	92.2	92.2	92.2	92.9
600	58.9	81.6	83.7	87.9	89.4	89.4	90.8	91.5	91.5	92.2	92.9	92.9	92.9	93.6
500	58.9	81.6	83.7	87.9	89.4	89.4	91.5	92.2	92.2	92.9	93.6	93.6	93.6	94.3
400	58.9	82.3	84.4	88.7	90.1	90.8	92.9	93.6	93.6	94.3	95.0	95.0	95.0	95.7
300	58.9	82.3	84.4	88.7	90.1	90.8	92.9	93.6	93.6	95.0	96.5	97.2	97.2	97.9
200	58.9	82.3	84.4	88.7	90.1	90.8	93.6	94.3	94.3	95.7	97.2	97.9	98.6	99.3
100	58.9	82.3	84.4	88.7	90.1	90.8	93.6	94.3	94.3	95.7	97.2	97.9	98.6	99.3
0	58.9	82.3	84.4	88.7	90.1	90.8	93.6	94.3	94.3	95.7	97.2	97.9	98.6	99.3

TOTAL NUMBER OF OBSERVATIONS

141

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

FEB

STATION

STATION NAME

YEARS

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

22  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	48.9	55.3	56.0	56.0	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 20000	53.2	61.7	63.1	63.1	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8
≥ 18000	53.2	61.7	63.1	63.1	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8
≥ 16000	53.2	61.7	63.1	63.1	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8
≥ 14000	53.2	62.4	63.8	63.8	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5
≥ 12000	53.9	63.1	64.5	64.5	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3
≥ 10000	55.3	64.5	66.0	66.0	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7
≥ 9000	55.3	64.5	66.0	66.0	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7
≥ 8000	56.7	66.1	70.2	70.2	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9
≥ 7000	56.7	66.1	70.2	70.2	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9
≥ 6000	57.5	68.8	70.9	70.9	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6
≥ 5000	59.6	70.9	73.1	73.1	73.8	73.8	73.8	73.8	73.8	73.8	73.8	73.8	73.8
≥ 4500	62.4	73.8	75.9	75.9	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6	76.6
≥ 4000	63.8	75.9	78.0	78.0	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 3500	64.5	76.6	78.7	78.7	80.1	80.1	80.1	80.1	80.1	80.1	80.1	80.1	80.1
≥ 3000	64.5	77.3	79.4	81.6	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3
≥ 2500	64.5	77.3	79.4	82.3	83.7	84.4	84.4	84.4	84.4	84.4	84.4	84.4	84.4
≥ 2000	65.3	79.4	81.6	85.1	86.5	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2
≥ 1800	65.3	79.4	81.6	85.1	86.5	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2
≥ 1500	65.3	79.4	81.6	85.1	86.5	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2
≥ 1200	65.3	80.1	82.3	85.8	87.2	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9
≥ 1000	65.3	80.1	82.3	85.8	87.2	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9
≥ 900	65.3	80.1	83.0	86.5	87.9	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
≥ 800	66.0	80.9	83.7	87.2	88.7	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4
≥ 700	66.0	80.9	83.7	87.2	88.7	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4
≥ 600	66.0	80.9	83.7	87.2	89.0	90.1	90.8	90.8	91.5	92.2	92.2	92.2	92.2
≥ 500	66.0	80.9	83.7	87.2	90.1	90.8	90.8	90.8	91.5	92.2	92.2	92.2	92.2
≥ 400	66.0	80.9	83.7	87.2	90.8	91.5	91.5	91.5	92.2	93.6	93.6	93.6	93.6
≥ 300	66.0	80.9	83.7	87.2	90.8	91.5	91.5	91.5	92.2	93.6	93.6	93.6	93.6
≥ 200	66.0	80.9	83.7	87.2	91.5	92.2	92.2	92.2	92.9	95.0	95.7	95.7	95.7
≥ 100	66.0	80.9	83.7	87.2	91.5	92.2	92.2	92.2	92.9	95.7	96.5	96.5	96.5
0	66.0	80.9	83.7	87.2	91.5	92.2	92.2	92.2	92.9	96.5	97.2	97.9	98.6

TOTAL NUMBER OF OBSERVATIONS

141

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

## CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

FEB

STATION

STATION NAME

YEARS

MONTH

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

ALL

HOURS (L S T)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	39.3	50.4	51.3	52.0	52.4	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6
≥ 20000	42.7	56.0	57.4	58.1	58.5	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7
≥ 18000	42.7	56.1	57.5	58.2	58.6	58.8	58.8	58.8	58.8	58.8	58.8	58.8	58.8
≥ 16000	42.7	56.1	57.5	58.2	58.6	58.8	58.8	58.8	58.8	58.8	58.8	58.8	58.8
≥ 14000	43.1	56.8	58.2	58.9	59.3	59.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5
≥ 12000	43.4	57.5	59.0	59.8	60.3	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5
≥ 10000	44.9	60.1	61.6	62.5	63.0	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2
≥ 9000	45.0	60.2	61.7	62.6	63.1	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3
≥ 8000	46.6	63.2	65.0	66.1	66.6	66.8	66.9	66.9	66.9	66.9	66.9	66.9	66.9
≥ 7000	47.0	63.7	65.5	66.6	67.1	67.4	67.5	67.5	67.5	67.5	67.5	67.5	67.5
≥ 6000	47.7	65.0	66.8	67.9	68.4	68.7	68.8	68.8	68.8	68.8	68.8	68.8	68.8
≥ 5000	48.4	66.0	67.7	69.0	69.5	69.8	69.9	69.9	69.9	69.9	69.9	69.9	69.9
≥ 4500	49.7	67.9	69.8	71.1	71.6	71.9	72.0	72.0	72.0	72.0	72.0	72.0	72.0
≥ 4000	51.9	71.7	73.7	75.1	75.8	76.2	76.2	76.2	76.2	76.2	76.2	76.2	76.2
≥ 3500	52.8	73.2	75.3	76.7	77.4	77.8	77.8	77.8	77.8	77.8	77.8	77.8	77.8
≥ 3000	53.8	75.0	77.1	79.0	80.1	80.5	80.7	80.7	80.7	80.7	80.7	80.7	80.7
≥ 2500	54.3	75.9	78.2	80.4	81.9	82.4	82.5	82.7	82.7	82.7	82.7	82.7	82.7
≥ 2000	54.7	76.9	79.5	82.5	84.0	84.6	84.9	85.2	85.2	85.2	85.3	85.3	85.3
≥ 1800	54.7	76.9	79.5	82.6	84.2	84.8	85.2	85.5	85.5	85.5	85.6	85.6	85.6
≥ 1500	54.7	77.3	80.1	83.2	85.0	85.6	86.3	86.5	86.5	86.5	86.6	86.6	86.6
≥ 1200	54.7	78.3	81.1	84.4	86.2	87.2	87.8	88.0	88.0	88.0	88.1	88.1	88.1
≥ 1000	54.8	78.8	81.7	85.1	87.0	87.9	88.7	89.0	89.0	89.0	89.1	89.1	89.1
≥ 900	54.9	78.9	82.0	85.4	87.2	88.2	89.0	89.3	89.3	89.4	89.5	89.5	89.5
≥ 800	55.0	79.3	82.5	86.0	87.9	88.9	89.8	90.1	90.1	90.4	90.6	90.7	90.7
≥ 700	55.0	79.3	82.6	86.1	88.0	89.2	90.1	90.4	90.4	90.9	91.1	91.1	91.1
≥ 600	55.0	79.3	82.7	86.3	88.7	89.9	91.0	91.5	91.5	91.9	92.1	92.2	92.2
≥ 500	55.0	79.3	82.7	86.4	88.7	90.1	91.3	91.9	91.9	92.6	92.7	92.8	92.8
≥ 400	55.0	79.3	82.7	86.4	88.9	90.4	91.9	92.6	92.6	93.2	93.4	93.5	93.5
≥ 300	55.0	79.5	83.0	86.7	89.3	90.9	92.6	93.4	93.4	94.2	94.5	94.8	95.2
≥ 200	55.0	79.5	83.0	86.7	89.4	91.0	92.7	93.5	93.5	94.5	95.1	95.5	96.1
≥ 100	55.0	79.5	83.0	86.7	89.4	91.0	92.9	93.7	93.7	94.9	95.7	96.2	97.1
0	55.0	79.5	83.0	86.7	89.4	91.0	92.9	93.7	93.7	94.9	95.8	96.3	97.4

1128

TOTAL NUMBER OF OBSERVATIONS

DIRNAVOCEANMET SMOS

AD-A063 832

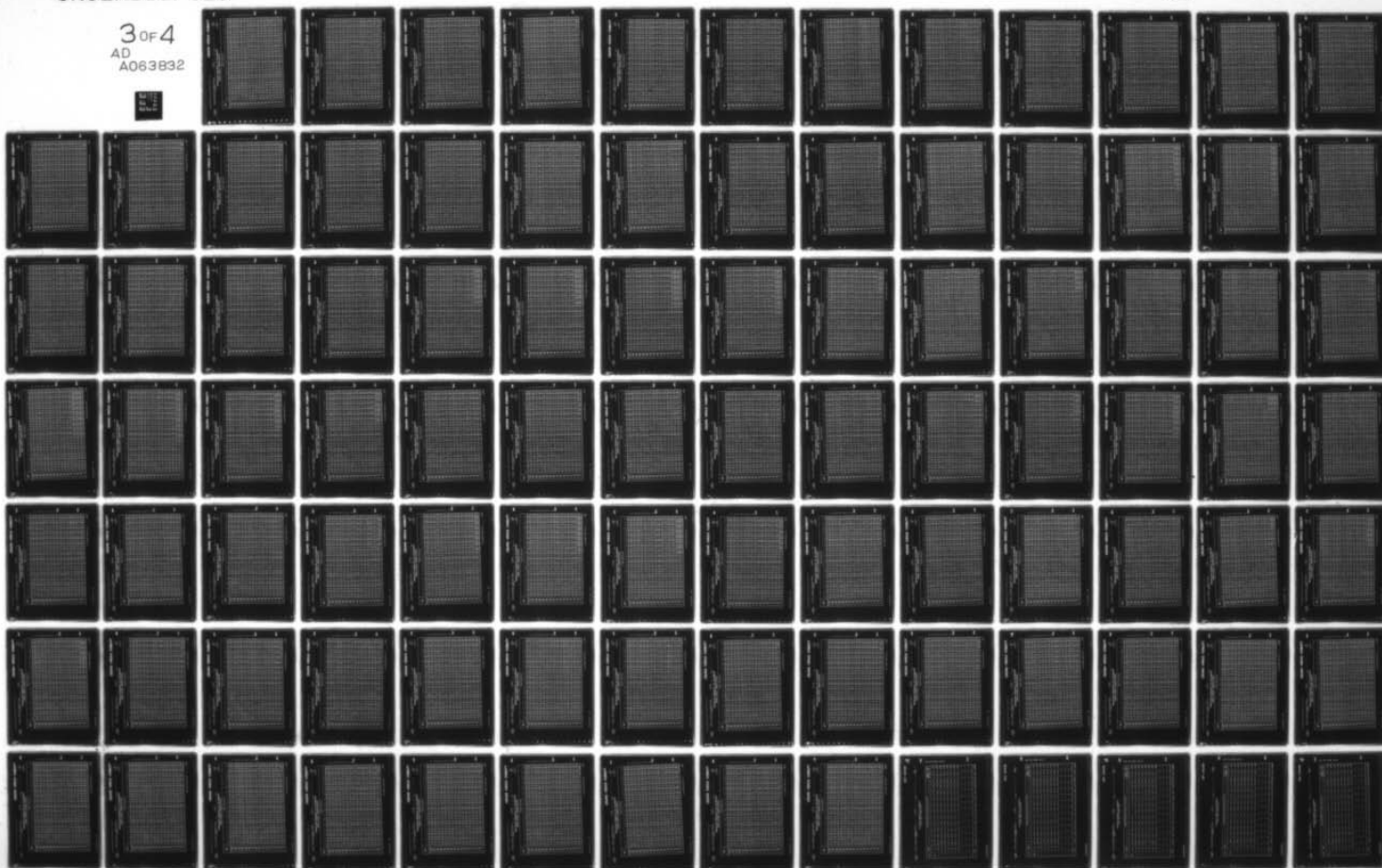
NAVAL WEATHER SERVICE DETACHMENT ASHEVILLE N C  
SUMMARY OF METEOROLOGICAL OBSERVATIONS, SURFACE (SMOS) WILLOW 6--ETC(U)  
JUL 78

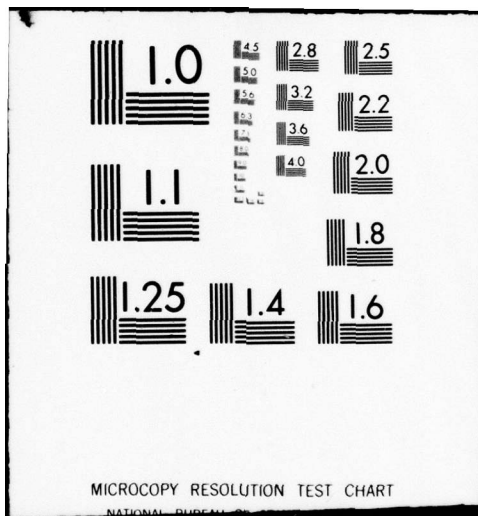
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# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

MAR  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

01  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)														≥ 0
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ 5/16	≥ ¼	≥ 0	
NO CEILING	36.8	44.5	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2
≥ 20000	39.4	49.0	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3
≥ 18000	39.4	49.0	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3
≥ 16000	39.4	49.0	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3
≥ 14000	40.0	50.3	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
≥ 12000	40.7	51.0	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3
≥ 10000	43.9	55.5	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 9000	43.9	55.5	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 8000	50.3	63.2	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5
≥ 7000	51.6	65.2	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5
≥ 6000	51.6	65.2	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5
≥ 5000	54.2	69.0	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3
≥ 4500	54.8	69.7	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6
≥ 4000	54.8	69.7	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6
≥ 3500	55.5	70.3	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9
≥ 3000	56.8	71.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6
≥ 2500	58.1	72.9	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8
≥ 2000	58.1	76.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1
≥ 1800	58.1	76.8	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7
≥ 1500	58.1	77.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 1200	58.1	78.1	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
≥ 1000	58.1	78.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
≥ 900	58.1	78.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
≥ 800	58.1	78.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
≥ 700	58.1	78.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
≥ 600	58.1	78.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
≥ 500	58.1	78.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
≥ 400	58.1	78.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
≥ 300	58.1	78.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
≥ 200	58.1	78.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
≥ 100	58.1	78.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
0	58.1	78.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

MAR  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

04  
HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 0
NO CEILING	35.5	40.0	40.0	40.0	40.7	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3
≥ 20000	40.7	47.1	47.1	47.1	47.7	48.4	49.0	49.0	49.0	49.0	49.0	49.0	49.0
≥ 18000	40.7	47.1	47.1	47.1	47.7	48.4	49.0	49.0	49.0	49.0	49.0	49.0	49.0
≥ 16000	40.7	47.1	47.1	47.1	47.7	48.4	49.0	49.0	49.0	49.0	49.0	49.0	49.0
≥ 14000	40.7	47.1	47.1	47.1	47.7	48.4	49.0	49.0	49.0	49.0	49.0	49.0	49.0
≥ 12000	41.3	49.7	49.7	49.7	50.3	51.0	51.6	51.6	51.6	51.6	51.6	51.6	51.6
≥ 10000	43.9	54.2	54.2	54.8	55.5	56.1	56.8	57.4	57.4	57.4	57.4	57.4	57.4
≥ 9000	43.9	54.2	54.2	54.8	55.5	56.1	56.8	57.4	57.4	57.4	57.4	57.4	57.4
≥ 8000	48.4	59.4	59.4	60.0	60.7	61.3	61.9	62.6	63.2	63.2	63.2	63.2	63.2
≥ 7000	48.4	59.4	59.4	60.0	60.7	61.3	61.9	62.6	63.2	63.2	63.2	63.2	63.2
≥ 6000	49.0	60.7	60.7	61.3	62.0	62.6	63.2	63.9	64.5	64.5	64.5	64.5	64.5
≥ 5000	49.7	61.9	61.9	62.6	63.3	63.9	64.5	65.2	65.8	65.8	65.8	65.8	65.8
≥ 4500	50.3	63.9	63.9	65.2	66.5	67.1	67.7	68.4	68.4	68.4	68.4	68.4	68.4
≥ 4000	52.9	67.7	68.4	69.7	71.0	71.6	72.3	72.9	72.9	72.9	72.9	72.9	72.9
≥ 3500	52.9	67.7	69.0	70.3	71.6	72.3	72.9	73.6	73.6	73.6	73.6	73.6	73.6
≥ 3000	54.8	69.7	71.0	72.3	73.6	74.2	74.8	75.5	75.5	75.5	75.5	75.5	75.5
≥ 2500	55.5	70.3	72.3	73.6	74.8	75.5	76.1	76.8	76.8	76.8	76.8	76.8	76.8
≥ 2000	56.1	71.0	74.2	75.5	76.8	77.4	78.1	78.7	78.7	78.7	78.7	78.7	78.7
≥ 1800	56.1	72.3	75.5	76.8	78.1	78.7	79.4	80.0	80.0	80.0	80.0	80.0	80.0
≥ 1500	56.8	73.6	77.4	78.7	80.0	80.7	81.3	81.9	81.9	81.9	81.9	81.9	81.9
≥ 1200	56.8	75.5	80.0	81.3	83.2	83.9	84.5	85.2	85.2	85.2	85.2	85.2	85.2
≥ 1000	56.8	75.5	80.0	81.3	83.2	83.9	84.5	85.2	85.2	85.2	85.2	85.2	85.2
≥ 900	56.8	75.5	80.0	81.3	83.2	83.9	84.5	85.2	85.2	85.2	85.2	85.2	85.2
≥ 800	56.8	75.5	80.0	81.3	83.9	84.5	85.2	85.8	85.8	85.8	85.8	85.8	85.8
≥ 700	56.8	75.5	80.0	81.3	84.5	85.2	85.8	86.5	86.5	86.5	86.5	86.5	86.5
≥ 600	56.8	76.1	80.7	82.6	85.2	85.8	86.5	87.1	87.1	87.1	87.1	87.1	87.1
≥ 500	56.8	76.1	80.7	82.6	85.8	87.1	88.4	89.7	89.7	89.7	90.3	90.3	90.3
≥ 400	56.8	76.1	80.7	82.6	85.8	87.1	88.4	89.7	89.7	89.7	90.3	90.3	90.3
≥ 300	56.8	76.1	80.7	82.6	85.8	87.1	89.7	91.0	91.0	91.0	92.3	92.3	92.3
≥ 200	56.8	76.1	80.7	82.6	85.8	87.1	91.0	92.3	92.3	92.3	93.6	93.6	93.6
≥ 100	56.8	76.1	80.7	82.6	85.8	87.1	91.0	92.3	92.3	93.6	94.8	94.8	94.8
≥ 0	56.8	76.1	80.7	82.6	85.8	87.1	91.0	92.3	92.3	93.6	94.8	96.8	96.8

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

MAR

STATION

STATION NAME

YEAR

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

HOURS (LST)

07

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	29.0	38.7	40.0	40.7	41.3	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
≥ 20000	29.7	41.9	43.2	44.5	45.2	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8
≥ 18000	29.7	41.9	43.2	44.5	45.2	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8
≥ 16000	29.7	41.9	43.2	44.5	45.2	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8
≥ 14000	31.0	43.2	44.5	45.8	46.5	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
≥ 12000	31.0	44.5	45.8	47.1	47.7	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4
≥ 10000	34.8	50.3	52.3	53.6	54.2	54.8	55.5	55.5	55.5	56.1	56.1	56.1	56.1
≥ 9000	34.8	50.3	52.3	53.6	54.2	54.8	55.5	55.5	55.5	56.1	56.1	56.1	56.1
≥ 8000	38.1	54.8	56.8	58.1	58.7	59.4	60.0	60.0	60.0	61.3	61.3	61.3	61.3
≥ 7000	38.7	57.4	59.4	60.7	61.3	61.9	62.6	62.6	62.6	63.9	63.9	63.9	63.9
≥ 6000	38.7	59.4	61.3	62.6	63.2	64.5	65.2	65.2	65.2	66.5	66.5	66.5	66.5
≥ 5000	38.7	60.0	62.6	63.9	64.5	65.8	66.5	66.5	66.5	67.7	67.7	67.7	67.7
≥ 4500	40.7	61.9	64.5	65.8	66.5	67.7	68.4	69.7	69.7	70.3	70.3	70.3	70.3
≥ 4000	40.7	63.2	66.5	67.7	68.4	69.7	70.3	70.3	70.3	71.6	72.3	72.3	72.3
≥ 3500	40.7	64.5	67.7	69.0	69.7	71.0	71.6	71.6	71.6	72.9	73.6	73.6	73.6
≥ 3000	40.7	64.5	68.4	69.7	70.3	71.6	72.3	72.3	72.3	73.6	74.2	74.2	74.2
≥ 2500	40.7	66.5	70.3	71.6	72.3	73.6	74.2	74.2	74.2	75.5	76.1	76.1	76.1
≥ 2000	41.3	67.1	71.0	72.3	72.9	74.2	74.8	74.8	74.8	76.1	76.8	76.8	76.8
≥ 1800	41.3	67.7	71.6	72.9	73.6	74.8	75.5	75.5	75.5	76.8	77.4	77.4	77.4
≥ 1500	41.3	67.7	71.6	73.6	74.8	76.1	77.4	77.4	77.4	78.7	80.0	80.0	80.0
≥ 1200	41.3	67.7	71.6	74.2	76.1	77.4	78.7	78.7	78.7	80.0	81.3	81.3	81.3
≥ 1000	41.3	68.4	72.9	75.5	77.4	78.7	80.0	80.0	80.0	81.3	82.6	82.6	82.6
≥ 900	41.3	68.4	73.6	76.1	78.1	79.4	80.7	80.7	80.7	81.9	83.2	83.2	83.2
≥ 800	41.3	69.0	74.8	78.1	80.0	81.3	82.6	82.6	82.6	85.2	86.5	86.5	86.5
≥ 700	41.3	69.7	76.1	79.4	81.3	83.2	84.5	84.5	84.5	87.1	88.4	88.4	88.4
≥ 600	41.3	69.7	76.1	79.4	81.3	83.2	84.5	84.5	84.5	87.1	88.4	88.4	88.4
≥ 500	41.3	69.7	76.1	79.4	81.3	83.2	84.5	85.2	85.2	87.7	89.0	89.0	89.0
≥ 400	41.3	69.7	76.1	79.4	81.3	83.9	85.2	85.8	85.8	88.4	89.7	89.7	89.7
≥ 300	41.3	69.7	76.1	79.4	81.3	84.5	86.5	87.7	87.7	90.3	92.3	92.3	92.3
≥ 200	41.3	69.7	76.1	79.4	81.3	84.5	87.7	89.0	89.0	91.6	94.2	94.2	94.2
≥ 100	41.3	69.7	76.1	79.4	81.3	84.5	87.7	89.0	89.0	91.6	94.2	94.2	94.2
0	41.3	69.7	76.1	79.4	81.3	84.5	87.7	89.0	89.0	91.6	94.2	94.2	94.2

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

MAR  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

10  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	30.3	44.3	44.3	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2
≥ 20000	32.3	50.3	50.3	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0
≥ 18000	32.3	50.3	51.0	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
≥ 16000	32.3	50.3	51.0	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
≥ 14000	34.2	52.9	53.6	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2
≥ 12000	35.5	54.2	54.8	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5
≥ 10000	36.1	57.4	59.4	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 9000	36.1	57.4	59.4	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 8000	37.4	61.3	63.9	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5
≥ 7000	38.1	61.9	64.5	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2
≥ 6000	38.1	61.9	64.5	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2
≥ 5000	38.1	62.6	65.2	65.8	65.8	65.8	65.8	65.8	65.8	65.8	65.8	65.8	65.8
≥ 4500	38.1	62.6	65.2	65.8	65.8	65.8	65.8	65.8	65.8	65.8	65.8	65.8	65.8
≥ 4000	38.7	63.9	67.1	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7
≥ 3500	40.7	65.8	69.0	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7
≥ 3000	41.3	69.0	72.3	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9
≥ 2500	41.9	71.0	74.8	76.1	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8
≥ 2000	41.9	71.6	75.5	76.8	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1
≥ 1800	41.9	71.6	75.5	76.8	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1
≥ 1500	41.9	72.3	76.8	78.7	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
≥ 1200	41.9	72.3	76.8	78.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7
≥ 1000	41.9	72.9	77.4	79.4	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9
≥ 900	41.9	73.6	78.1	80.0	82.6	82.6	82.6	82.6	82.6	82.6	82.6	82.6	82.6
≥ 800	41.9	73.6	78.1	80.0	82.6	82.6	82.6	82.6	82.6	82.6	82.6	82.6	82.6
≥ 700	41.9	73.6	78.1	80.0	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
≥ 600	41.9	73.6	78.1	80.0	85.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2
≥ 500	41.9	73.6	78.1	80.0	85.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2
≥ 400	41.9	73.6	78.1	80.0	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
≥ 300	41.9	73.6	78.1	80.0	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
≥ 200	41.9	73.6	78.1	80.0	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
≥ 100	41.9	73.6	78.1	80.0	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
0	41.9	73.6	78.1	80.0	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8

TOTAL NUMBER OF OBSERVATIONS 155

DIRNAVOCEANMET SMOS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

MAR  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

13  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	27.7	37.4	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1
≥ 20000	31.6	47.1	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7
≥ 18000	31.6	47.1	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7
≥ 16000	31.6	47.1	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7
≥ 14000	32.3	47.7	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4
≥ 12000	32.9	49.7	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3
≥ 10000	32.9	51.6	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3
≥ 9000	32.9	51.6	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3
≥ 8000	33.6	56.8	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4
≥ 7000	34.2	57.4	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1
≥ 6000	34.8	58.7	59.4	59.4	59.4	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 5000	35.5	60.0	60.7	60.7	60.7	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3
≥ 4500	36.1	62.6	63.2	63.2	63.2	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9
≥ 4000	37.4	67.1	67.7	67.7	67.7	68.4	68.4	68.4	68.4	68.4	68.4	68.4	68.4	68.4
≥ 3500	38.1	68.4	69.0	69.0	69.0	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7
≥ 3000	38.7	72.3	73.6	74.8	75.5	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1
≥ 2500	39.4	74.2	75.5	76.8	77.4	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1
≥ 2000	40.7	75.5	76.8	78.1	78.7	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 1800	40.7	75.5	76.8	78.1	78.7	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 1500	41.3	76.1	77.4	79.4	80.0	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7
≥ 1200	41.3	76.8	78.1	80.0	81.3	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9
≥ 1000	41.3	78.1	79.4	81.9	83.9	84.5	85.2	85.8	85.8	85.8	85.8	85.8	85.8	85.8
≥ 900	41.3	78.1	79.4	82.6	84.5	85.2	85.8	86.5	86.5	86.5	86.5	86.5	86.5	86.5
≥ 800	41.3	78.1	79.4	82.6	84.5	85.2	85.8	87.1	87.1	87.1	87.1	87.1	87.1	87.1
≥ 700	41.3	78.1	79.4	82.6	84.5	85.2	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 600	41.3	78.7	80.7	83.9	85.8	86.5	87.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7
≥ 500	41.3	78.7	80.7	83.9	85.8	87.1	89.0	91.0	91.0	92.9	94.2	94.2	94.2	94.2
≥ 400	41.3	78.7	80.7	83.9	85.8	87.1	89.0	91.0	91.0	93.6	94.8	95.5	95.5	95.5
≥ 300	41.3	78.7	80.7	83.9	85.8	87.1	89.0	91.6	91.6	95.5	97.4	98.1	98.1	98.1
≥ 200	41.3	78.7	80.7	83.9	85.8	87.1	89.0	91.6	91.6	95.5	97.4	98.7	98.7	98.7
≥ 100	41.3	78.7	80.7	83.9	85.8	87.1	89.0	91.6	91.6	95.5	97.4	98.7	98.7	98.7
≥ 0	41.3	78.7	80.7	83.9	85.8	87.1	89.0	91.6	91.6	95.5	97.4	99.4	99.4	100.0

155

TOTAL NUMBER OF OBSERVATIONS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

TEARS

MAR  
MONTH

16  
HOURS (L.S.T.)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)														
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	≥ 0
NO CEILING	25.2	39.4	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7
≥ 20000	30.3	45.8	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
≥ 18000	30.3	45.8	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
≥ 16000	30.3	45.8	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
≥ 14000	31.6	47.1	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4
≥ 12000	31.6	47.1	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0
≥ 10000	32.3	52.9	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8
≥ 9000	32.3	52.9	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8
≥ 8000	32.3	54.2	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1
≥ 7000	32.9	55.5	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4
≥ 6000	32.9	55.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1
≥ 5000	34.8	59.4	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3
≥ 4500	34.8	59.4	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3
≥ 4000	36.8	63.2	65.8	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5
≥ 3500	37.4	65.8	69.0	69.7	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3
≥ 3000	40.0	72.3	75.5	76.1	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8
≥ 2500	40.7	73.6	76.8	77.4	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1
≥ 2000	40.7	74.8	78.7	79.4	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
≥ 1800	40.7	74.8	78.7	79.4	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
≥ 1500	41.3	76.1	80.0	80.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
≥ 1200	41.9	76.8	80.7	81.3	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9
≥ 1000	41.9	76.8	81.3	81.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
≥ 900	41.9	76.8	81.3	81.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
≥ 800	41.9	76.8	81.3	81.9	83.9	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5
≥ 700	41.9	76.8	81.3	81.9	83.9	84.5	85.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2
≥ 600	42.6	77.4	81.9	83.2	85.8	86.5	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1
≥ 500	42.6	77.4	81.9	83.9	86.5	87.7	89.0	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7
≥ 400	42.6	78.1	82.6	84.5	87.7	89.0	91.0	91.6	91.6	91.6	92.3	92.9	92.9	92.9	92.9
≥ 300	42.6	78.1	82.6	84.5	87.7	89.0	91.6	92.9	92.9	92.9	93.6	94.2	94.2	94.2	94.2
≥ 200	42.6	78.1	82.6	84.5	87.7	89.0	91.6	92.9	92.9	92.9	94.2	94.8	94.8	94.8	94.8
≥ 100	42.6	78.1	82.6	84.5	87.7	89.0	91.6	92.9	92.9	92.9	94.2	94.8	94.8	94.8	94.8
0	42.6	78.1	82.6	84.5	87.7	89.0	91.6	92.9	92.9	92.9	94.2	94.8	94.8	94.8	94.8

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

MAR

STATION NAME

YEARS

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

19

HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	36.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
≥ 20000	38.7	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
≥ 18000	38.7	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
≥ 16000	38.7	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
≥ 14000	39.4	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
≥ 12000	40.0	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2
≥ 10000	40.7	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1
≥ 9000	40.7	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1
8000	43.9	60.7	61.3	61.3	61.9	61.9	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2
7000	45.8	62.6	63.2	63.2	63.9	63.9	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2
6000	45.8	63.2	63.9	63.9	64.5	64.5	65.8	65.8	65.8	65.8	65.8	65.8	65.8	65.8
5000	46.5	63.9	64.5	65.2	65.8	65.8	67.1	67.1	67.1	67.1	67.1	67.1	67.1	67.1
4500	48.4	67.1	67.7	68.4	69.0	69.0	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3
4000	49.7	69.0	70.3	71.0	71.6	71.6	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9
3500	49.7	69.7	71.0	71.6	72.3	72.3	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6
3000	51.0	71.6	72.9	73.6	74.2	74.2	75.5	75.5	75.5	75.5	75.5	75.5	75.5	75.5
2500	51.6	72.9	74.2	74.8	75.5	75.5	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8
2000	52.9	74.8	76.1	77.4	78.1	78.1	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
1800	53.6	76.1	77.4	78.7	79.4	79.4	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7
1500	53.6	76.8	78.1	79.4	80.0	80.0	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
1200	53.6	76.8	78.1	79.4	80.7	81.3	82.6	82.6	82.6	82.6	82.6	82.6	82.6	82.6
1000	53.6	78.7	80.0	81.9	83.2	83.9	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
900	53.6	78.7	80.0	81.9	83.2	83.9	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
800	53.6	78.7	80.0	81.9	83.2	83.9	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
700	53.6	78.7	80.0	81.9	83.2	83.9	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
600	53.6	78.7	80.0	81.9	83.2	84.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
500	53.6	78.7	81.3	83.2	84.5	85.8	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0
400	53.6	78.7	81.9	83.9	86.5	87.7	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0
300	53.6	78.7	81.9	83.9	86.5	87.7	91.0	91.6	92.3	92.3	92.3	92.3	92.3	92.3
200	53.6	78.7	81.9	83.9	86.5	87.7	91.0	91.6	92.3	92.9	92.9	94.8	94.8	94.8
100	53.6	78.7	81.9	83.9	86.5	87.7	91.0	91.6	92.9	93.6	93.6	96.8	96.8	97.4
0	53.6	78.7	81.9	83.9	86.5	87.7	91.0	91.6	92.9	93.6	93.6	97.4	97.4	98.1

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

MAR  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

22  
HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	40.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	48.4	49.0	49.0
≥ 20000	43.2	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.9	53.6	53.6
≥ 18000	43.2	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.9	53.6	53.6
≥ 16000	43.2	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.9	53.6	53.6
≥ 14000	43.9	53.6	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.8	55.5	55.5
≥ 12000	45.8	55.5	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.8	57.4	57.4
≥ 10000	46.5	56.8	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	58.1	58.7	58.7
≥ 9000	46.5	56.8	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	58.1	58.7	58.7
≥ 8000	49.7	63.9	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	65.2	66.5	66.5
≥ 7000	49.7	63.9	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	65.2	66.5	66.5
≥ 6000	50.3	64.5	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.8	67.1	67.1
≥ 5000	52.3	66.5	67.1	67.1	67.1	67.1	67.1	67.1	67.1	67.1	67.7	69.0	69.0
≥ 4500	52.9	69.0	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	70.3	71.6	71.6
≥ 4000	52.9	69.7	70.3	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.6	72.9	72.9
≥ 3500	53.6	71.0	71.6	72.9	72.9	72.9	72.9	72.9	72.9	72.9	73.6	74.8	74.8
≥ 3000	54.8	73.6	74.2	75.5	75.5	75.5	75.5	75.5	75.5	75.5	76.1	77.4	77.4
≥ 2500	54.8	73.6	74.2	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.8	78.1	78.1
≥ 2000	56.1	76.1	77.4	79.4	81.3	81.3	81.3	81.3	81.3	81.3	81.9	83.2	83.2
≥ 1800	56.1	76.1	77.4	79.4	81.3	81.3	81.3	81.3	81.3	81.3	81.9	83.2	83.2
≥ 1500	56.8	77.4	78.7	80.7	82.6	82.6	82.6	82.6	82.6	82.6	83.2	84.5	84.5
≥ 1200	57.4	78.7	80.0	81.9	83.9	83.9	83.9	83.9	83.9	83.9	84.5	85.8	85.8
≥ 1000	57.4	78.7	80.0	81.9	83.9	83.9	83.9	83.9	83.9	83.9	84.5	85.8	85.8
≥ 900	57.4	78.7	80.0	81.9	83.9	83.9	83.9	83.9	83.9	83.9	84.5	85.8	85.8
≥ 800	57.4	78.7	80.0	81.9	83.9	83.9	83.9	83.9	83.9	83.9	84.5	85.8	85.8
≥ 700	57.4	79.4	80.7	82.6	84.5	84.5	84.5	84.5	84.5	84.5	85.2	86.5	86.5
≥ 600	57.4	79.4	80.7	83.2	85.2	85.2	85.2	85.2	85.2	85.2	85.8	87.1	87.1
≥ 500	57.4	79.4	80.7	83.9	85.8	85.8	85.8	85.8	85.8	85.8	86.5	87.7	87.7
≥ 400	57.4	79.4	80.7	83.9	86.5	86.5	86.5	86.5	86.5	86.5	87.1	88.4	88.4
≥ 300	57.4	79.4	81.9	85.2	87.7	87.7	87.7	87.7	87.7	87.7	88.4	89.7	89.7
≥ 200	57.4	79.4	81.9	85.2	87.7	87.7	87.7	87.7	87.7	87.7	88.4	89.7	89.7
≥ 100	57.4	79.4	81.9	85.2	87.7	87.7	87.7	87.7	87.7	87.7	88.4	89.7	89.7
0	57.4	79.4	81.9	85.2	87.7	87.7	87.7	87.7	87.7	87.7	88.4	89.7	89.7

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

MAR

STATION NAME

YEARS

NORTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

ALL

MOUSE (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)															
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	≥ 0	≥ 0
NO CEILING	32.7	42.4	42.9	43.1	43.2	43.4	43.4	43.4	43.4	43.4	43.5	43.5	43.6	43.6	43.6	43.6
≥ 20000	35.7	48.2	48.7	49.0	49.1	49.3	49.4	49.4	49.4	49.4	49.4	49.4	49.5	49.5	49.5	49.5
≥ 18000	35.7	48.2	48.8	49.0	49.2	49.4	49.4	49.4	49.4	49.4	49.5	49.5	49.6	49.6	49.6	49.6
≥ 16000	35.7	48.2	48.8	49.0	49.2	49.4	49.4	49.4	49.4	49.4	49.5	49.5	49.6	49.6	49.6	49.6
≥ 14000	35.6	49.4	50.1	50.3	50.5	50.7	50.7	50.7	50.7	50.7	50.8	50.8	50.9	50.9	50.9	50.9
≥ 12000	37.3	50.8	51.5	51.8	51.9	52.1	52.2	52.2	52.2	52.2	52.3	52.3	52.3	52.3	52.3	52.3
≥ 10000	38.9	54.4	55.4	55.7	55.9	56.1	56.3	56.4	56.4	56.5	56.6	56.6	56.7	56.7	56.7	56.7
≥ 9000	38.9	54.4	55.4	55.7	55.9	56.1	56.3	56.4	56.4	56.5	56.6	56.6	56.7	56.7	56.7	56.7
≥ 8000	41.7	59.2	60.4	60.7	61.0	61.1	61.5	61.5	61.5	61.7	61.9	61.9	62.0	62.0	62.0	62.1
≥ 7000	42.4	60.4	61.6	61.9	62.3	62.4	62.7	62.8	62.8	63.0	63.2	63.2	63.3	63.3	63.3	63.4
≥ 6000	42.7	61.2	62.4	62.7	63.1	63.4	63.7	63.8	63.8	64.0	64.1	64.1	64.3	64.3	64.3	64.5
≥ 5000	43.7	62.9	64.2	64.6	64.9	65.2	65.7	65.7	65.7	65.9	66.1	66.1	66.2	66.2	66.2	66.5
≥ 4500	44.5	64.5	65.9	66.4	66.7	67.0	67.4	67.5	67.5	67.7	67.9	67.9	68.1	68.1	68.1	68.3
≥ 4000	45.5	66.7	68.5	69.1	69.5	69.8	70.3	70.4	70.4	70.6	70.8	70.8	71.0	71.0	71.0	71.2
≥ 3500	46.1	67.9	69.8	70.6	71.1	71.4	71.9	71.9	71.9	72.1	72.3	72.3	72.5	72.5	72.5	72.7
≥ 3000	47.3	70.6	72.7	73.6	74.1	74.4	74.9	75.0	75.0	75.2	75.4	75.4	75.6	75.6	75.6	75.8
≥ 2500	47.8	71.9	74.1	75.2	75.8	76.1	76.6	76.7	76.7	76.9	77.1	77.1	77.3	77.3	77.3	77.5
≥ 2000	48.5	73.4	76.0	77.2	78.2	78.5	79.0	79.1	79.1	79.3	79.5	79.5	79.7	79.7	79.7	79.9
≥ 1800	48.6	73.9	76.5	77.7	78.6	79.0	79.5	79.6	79.6	79.8	80.0	80.0	80.2	80.2	80.2	80.4
≥ 1500	48.9	74.7	77.4	78.9	79.9	80.2	80.9	81.0	81.0	81.1	81.5	81.5	81.7	81.7	81.7	81.9
≥ 1200	49.0	75.3	78.2	79.7	81.1	81.5	82.2	82.3	82.3	82.4	82.8	82.8	83.0	83.0	83.0	83.3
≥ 1000	49.0	76.0	79.0	80.7	82.5	82.9	83.7	84.0	84.0	84.2	84.6	84.6	84.8	84.8	84.8	85.1
≥ 900	49.0	76.1	79.2	81.0	82.7	83.2	84.0	84.2	84.3	84.4	84.8	84.8	85.0	85.0	85.0	85.3
≥ 800	49.0	76.1	79.4	81.3	83.2	83.7	84.6	85.0	85.1	85.5	85.9	85.9	86.1	86.1	86.1	86.4
≥ 700	49.0	76.3	79.7	81.6	83.6	84.3	85.3	85.7	85.8	86.2	86.6	86.6	86.9	86.9	86.9	87.2
≥ 600	49.2	76.6	80.2	82.3	84.5	85.3	86.6	87.1	87.2	87.6	88.0	88.0	88.2	88.2	88.2	88.6
≥ 500	49.2	76.7	80.4	82.7	85.1	86.2	87.7	88.6	88.7	89.3	90.2	90.2	90.5	90.5	90.6	91.0
≥ 400	49.2	76.8	80.6	82.9	85.7	86.9	88.7	89.7	89.8	90.7	91.5	91.5	91.9	91.9	92.0	92.4
≥ 300	49.2	76.8	80.7	83.1	85.8	87.2	89.4	90.7	90.7	92.1	93.2	93.3	93.7	93.7	93.9	94.3
≥ 200	49.2	76.8	80.7	83.1	85.8	87.2	89.8	91.1	91.1	92.8	94.2	94.4	95.4	95.4	95.7	96.1
≥ 100	49.2	76.8	80.7	83.1	85.8	87.2	89.8	91.1	91.1	92.9	94.6	94.6	96.6	96.6	97.2	98.0
≥ 0	49.2	76.8	80.7	83.1	85.8	87.2	89.8	91.1	91.1	93.0	94.7	94.8	96.9	97.0	97.8	100.0

TOTAL NUMBER OF OBSERVATIONS 1240

DIRNAVOCEANMET SMOS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

APR

STATION NAME

YEARS

NORTH

01

HOURS (L.S.T.)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾
NO CEILING	47.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3
≥ 20000	48.7	60.7	60.7	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3
≥ 18000	48.7	60.7	60.7	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3
≥ 16000	48.7	60.7	60.7	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3
≥ 14000	49.3	61.3	61.3	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0
≥ 12000	50.7	62.7	62.7	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3
≥ 10000	54.0	67.3	67.3	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
≥ 9000	54.7	68.0	68.7	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3
≥ 8000	57.3	71.3	72.7	73.3	74.0	74.0	74.0	74.0	74.0	74.0	74.0
≥ 7000	57.3	71.3	72.7	73.3	74.0	74.0	74.0	74.0	74.0	74.0	74.0
≥ 6000	59.3	74.0	75.3	76.0	76.7	76.7	76.7	76.7	77.3	77.3	77.3
≥ 5000	60.7	75.3	76.7	77.3	78.0	78.0	78.0	78.0	78.7	78.7	78.7
≥ 4500	62.0	76.7	78.0	78.7	79.3	79.3	79.3	79.3	80.0	80.0	80.0
≥ 4000	62.7	78.0	79.3	80.0	80.7	80.7	80.7	80.7	81.3	81.3	81.3
≥ 3500	62.7	78.7	80.0	80.7	81.3	81.3	81.3	81.3	82.0	82.0	82.0
≥ 3000	62.7	78.7	80.7	81.3	82.0	82.0	82.0	82.0	82.7	82.7	82.7
≥ 2500	63.3	80.0	82.0	82.7	83.3	83.3	83.3	83.3	84.0	84.0	84.0
≥ 2000	64.7	81.3	83.3	84.7	85.3	85.3	85.3	86.0	86.7	86.7	86.7
≥ 1800	64.7	81.3	83.3	84.7	85.3	85.3	85.3	86.0	86.7	86.7	86.7
≥ 1500	66.0	84.0	86.7	88.0	88.7	88.7	88.7	89.3	89.3	89.3	89.3
≥ 1200	66.0	84.0	87.3	88.7	89.3	89.3	89.3	90.0	90.7	90.7	90.7
≥ 1000	66.0	84.0	88.0	89.3	90.0	90.0	90.0	90.7	91.3	91.3	91.3
≥ 900	66.0	84.0	88.0	89.3	90.0	90.0	90.0	90.7	91.3	91.3	91.3
≥ 800	66.0	84.0	88.0	89.3	90.0	90.0	90.0	90.7	91.3	91.3	91.3
≥ 700	66.0	84.0	88.0	89.3	90.0	90.0	90.0	90.7	91.3	91.3	91.3
≥ 600	66.7	84.7	88.7	90.0	91.3	92.7	92.7	94.7	95.3	95.3	95.3
≥ 500	66.7	84.7	89.3	90.7	92.0	93.3	93.3	95.3	96.0	96.0	96.0
≥ 400	66.7	84.7	89.3	90.7	92.0	93.3	93.3	96.0	96.7	96.7	96.7
≥ 300	66.7	85.3	90.0	91.3	92.7	94.0	94.0	97.3	98.0	98.7	98.7
≥ 200	66.7	85.3	90.0	91.3	93.3	94.7	94.7	98.0	98.7	99.3	99.3
≥ 100	66.7	85.3	90.0	91.3	93.3	94.7	94.7	98.0	98.7	99.3	99.3
0	66.7	85.3	90.0	91.3	93.3	94.7	94.7	98.0	98.7	99.3	99.3

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET SMOS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

APR  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

04  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	39.3	50.7	51.3	52.0	52.0	52.0	52.0	52.7	52.7	52.7	52.7	52.7	52.7
≥ 20000	43.3	56.7	58.0	58.7	58.7	58.7	58.7	59.3	59.3	59.3	59.3	59.3	59.3
≥ 18000	43.3	56.7	58.0	58.7	58.7	58.7	58.7	59.3	59.3	59.3	59.3	59.3	59.3
≥ 16000	43.3	56.7	58.0	58.7	58.7	58.7	58.7	59.3	59.3	59.3	59.3	59.3	59.3
≥ 14000	44.7	58.0	59.3	60.0	60.0	60.0	60.0	60.7	60.7	60.7	60.7	60.7	60.7
≥ 12000	48.7	63.3	64.7	65.3	65.3	65.3	65.3	66.0	66.0	66.0	66.0	66.0	66.0
≥ 10000	49.3	64.7	66.0	66.7	66.7	66.7	66.7	67.3	67.3	67.3	67.3	67.3	67.3
≥ 9000	50.0	65.3	66.7	67.3	67.3	67.3	67.3	68.0	68.0	68.0	68.0	68.0	68.0
≥ 8000	51.3	68.7	70.7	71.3	71.3	71.3	71.3	72.0	72.0	72.0	72.0	72.0	72.0
≥ 7000	52.7	70.7	72.7	73.3	73.3	73.3	73.3	74.0	74.0	74.0	74.0	74.0	74.0
≥ 6000	53.3	72.0	74.0	74.7	74.7	74.7	74.7	75.3	75.3	75.3	75.3	75.3	75.3
≥ 5000	54.0	72.7	74.7	75.3	75.3	75.3	75.3	76.0	76.0	76.0	76.0	76.0	76.0
≥ 4500	56.7	75.3	77.3	78.0	78.0	78.0	78.0	78.7	78.7	78.7	78.7	78.7	78.7
≥ 4000	57.3	76.0	78.7	79.3	79.3	79.3	79.3	80.0	80.0	80.0	80.0	80.0	80.0
≥ 3500	57.3	76.7	79.3	80.0	80.0	80.0	80.0	81.3	81.3	81.3	81.3	81.3	81.3
≥ 3000	58.7	78.7	81.3	82.0	82.0	82.0	82.0	83.3	83.3	83.3	83.3	83.3	83.3
≥ 2500	59.3	79.3	82.0	82.7	82.7	82.7	82.7	84.0	84.0	84.0	84.0	84.0	84.0
≥ 2000	61.3	82.0	84.7	85.3	85.3	85.3	85.3	86.0	86.0	86.0	86.0	86.0	86.0
≥ 1800	61.3	82.0	84.7	85.3	85.3	85.3	85.3	86.0	86.0	86.0	86.0	86.0	86.0
≥ 1500	61.3	82.7	86.0	86.7	86.7	86.7	86.7	87.3	87.3	87.3	87.3	87.3	87.3
≥ 1200	61.3	82.7	86.0	86.7	86.7	86.7	86.7	87.3	87.3	87.3	87.3	87.3	87.3
≥ 1000	61.3	83.3	86.7	87.3	87.3	87.3	87.3	88.0	88.0	88.0	88.0	88.0	88.0
≥ 900	61.3	83.3	86.7	87.3	87.3	87.3	87.3	88.0	88.0	88.0	88.0	88.0	88.0
≥ 800	62.0	84.0	88.0	88.7	88.7	88.7	88.7	89.3	89.3	89.3	89.3	89.3	89.3
≥ 700	62.0	84.0	88.0	88.7	88.7	88.7	88.7	89.3	89.3	89.3	89.3	89.3	89.3
≥ 600	62.0	84.7	88.7	89.3	89.3	89.3	89.3	90.0	90.0	90.0	90.0	90.0	90.0
≥ 500	62.0	84.7	88.7	89.3	89.3	89.3	89.3	90.0	90.0	90.0	90.0	90.0	90.0
≥ 400	62.0	84.7	88.7	89.3	89.3	89.3	89.3	90.0	90.0	90.0	90.0	90.0	90.0
≥ 300	62.0	84.7	88.7	89.3	89.3	89.3	89.3	90.0	90.0	90.0	90.0	90.0	90.0
≥ 200	62.0	84.7	88.7	89.3	89.3	89.3	89.3	90.0	90.0	90.0	90.0	90.0	90.0
≥ 100	62.0	84.7	88.7	89.3	89.3	89.3	89.3	90.0	90.0	90.0	90.0	90.0	90.0
0	62.0	84.7	88.7	89.3	89.3	89.3	89.3	90.0	90.0	90.0	90.0	90.0	90.0

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

## CEILING VERSUS VISIBILITY

14793  
STATIONWILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

APR  
MONTHPERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

07

HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	34.0	48.7	50.7	51.3	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7
≥ 20000	34.7	50.7	54.0	54.7	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.7
≥ 18000	34.7	50.7	54.0	54.7	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.7
≥ 16000	34.7	50.7	54.0	54.7	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.7
≥ 14000	35.3	52.0	55.3	56.0	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	58.0
≥ 12000	35.3	52.0	55.3	56.0	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	58.0
≥ 10000	38.7	58.7	62.7	63.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	66.0
≥ 9000	38.7	58.7	63.3	64.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.7
≥ 8000	39.3	64.0	68.7	69.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	72.0
≥ 7000	39.3	64.0	68.7	69.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	72.0
≥ 6000	41.3	67.3	72.7	73.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3	76.0
≥ 5000	42.7	68.7	74.0	75.3	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.7
≥ 4500	43.3	70.0	75.3	76.7	79.3	79.3	79.3	79.3	79.3	79.3	79.3	79.3	80.0
≥ 4000	44.0	70.7	76.0	77.3	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.7
≥ 3500	44.7	71.3	76.7	78.0	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	82.0
≥ 3000	46.7	73.3	79.3	80.7	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.7
≥ 2500	47.3	74.7	80.7	82.0	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	86.7
≥ 2000	48.0	76.7	82.7	84.0	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	88.7
≥ 1800	48.0	76.7	82.7	84.0	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	88.7
≥ 1500	48.0	76.7	82.7	84.0	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	88.7
≥ 1200	48.0	76.7	82.7	84.0	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	88.7
≥ 1000	48.0	76.7	82.7	84.0	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	88.7
≥ 900	48.0	78.0	84.0	86.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	91.3
≥ 800	48.0	78.0	84.0	86.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	91.3
≥ 700	48.0	78.0	84.0	86.7	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	92.0
≥ 600	48.0	78.0	84.0	86.7	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.7
≥ 500	48.0	78.0	85.3	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0	95.3
≥ 400	48.0	78.0	85.3	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0	95.3
≥ 300	48.0	78.0	85.3	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0	95.3
≥ 200	48.0	78.0	85.3	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0	95.3
≥ 100	48.0	78.0	85.3	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0	95.3
≥ 0	48.0	78.0	85.3	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0	95.3

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET

SMOS

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

APR

STATION

STATION NAME

YEARS

MOUTH

10

HOURS (L.S.T.)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	33.3	48.0	50.0	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3
≥ 20000	35.3	51.3	53.3	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7
≥ 18000	35.3	51.3	53.3	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7
≥ 16000	35.3	51.3	53.3	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7
≥ 14000	35.3	52.0	54.0	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
≥ 12000	35.3	52.0	54.0	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
≥ 10000	38.0	56.0	58.0	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3
≥ 9000	38.0	56.7	58.7	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 8000	38.7	58.7	60.7	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0
≥ 7000	38.7	59.3	61.3	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7
≥ 6000	38.7	61.3	64.0	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3
≥ 5000	40.0	64.7	68.0	69.3	69.3	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
≥ 4500	40.7	66.0	70.0	71.3	71.3	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0
≥ 4000	44.7	70.0	74.0	75.3	75.3	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0
≥ 3500	47.3	74.0	78.0	79.3	79.3	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
≥ 3000	48.7	78.7	83.3	84.7	84.7	85.3	86.0	86.0	86.0	86.0	86.0	86.0	86.0
≥ 2500	49.3	80.0	84.7	86.0	86.0	86.7	87.3	87.3	87.3	87.3	87.3	87.3	87.3
≥ 2000	49.3	80.0	86.0	87.3	88.0	88.7	89.3	89.3	89.3	89.3	89.3	89.3	89.3
≥ 1800	49.3	80.7	86.7	88.0	88.7	89.3	90.0	90.0	90.0	90.0	90.0	90.0	90.0
≥ 1500	50.0	82.0	88.0	89.3	90.0	90.7	91.3	91.3	91.3	91.3	91.3	91.3	91.3
≥ 1200	50.0	82.7	88.7	90.0	90.7	91.3	92.0	92.0	92.0	92.0	92.0	92.0	92.0
≥ 1000	50.0	84.0	90.0	91.3	92.7	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0
≥ 900	50.0	84.0	90.0	91.3	93.3	94.7	95.3	95.3	95.3	95.3	95.3	95.3	95.3
≥ 800	50.0	84.0	90.0	91.3	93.3	94.7	95.3	95.3	95.3	95.3	95.3	95.3	95.3
≥ 700	50.0	84.7	90.7	92.0	94.0	95.3	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 600	50.0	84.7	90.7	92.0	94.0	95.3	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 500	50.0	84.7	90.7	92.0	94.0	95.3	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 400	50.0	84.7	90.7	92.0	94.0	95.3	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 300	50.0	84.7	90.7	92.0	94.0	95.3	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 200	50.0	84.7	90.7	92.0	94.0	95.3	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 100	50.0	84.7	90.7	92.0	94.0	95.3	96.0	96.0	96.0	96.0	96.0	96.0	96.0
0	50.0	84.7	90.7	92.0	94.0	95.3	96.0	96.0	96.0	96.0	96.0	96.0	96.0

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

APR  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

13  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	31.3	43.3	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7
≥ 20000	36.0	49.3	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
≥ 18000	36.0	49.3	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
≥ 16000	36.0	49.3	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
≥ 14000	36.0	49.3	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
≥ 12000	36.0	50.7	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3
≥ 10000	36.7	52.7	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 9000	38.0	54.0	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3
≥ 8000	40.7	58.7	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0
≥ 7000	40.7	59.3	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7
≥ 6000	42.0	62.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0
≥ 5000	42.0	62.0	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7
≥ 4500	42.7	64.0	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7
≥ 4000	46.7	68.7	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0
≥ 3500	50.0	72.7	78.0	78.0	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7
≥ 3000	52.7	78.0	83.3	83.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3
≥ 2500	53.3	80.0	86.0	86.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0
≥ 2000	54.0	81.3	88.0	88.0	90.0	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7
≥ 1800	54.0	81.3	88.0	88.0	90.0	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7
≥ 1500	54.0	81.3	88.0	88.0	90.0	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7
≥ 1200	54.0	81.3	88.7	88.7	90.7	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3
≥ 1000	54.0	81.3	88.7	88.7	90.7	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0
≥ 900	54.0	81.3	88.7	88.7	90.7	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0
≥ 800	54.0	81.3	90.0	90.7	92.7	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0
≥ 700	54.0	81.3	90.0	90.7	92.7	94.7	94.7	95.3	95.3	95.3	95.3	95.3	95.3	95.3
≥ 600	54.0	81.3	90.0	90.7	93.3	95.3	95.3	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 500	54.0	81.3	90.0	90.7	93.3	95.3	95.3	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 400	54.0	81.3	90.0	90.7	94.0	96.0	96.0	96.7	96.7	96.7	96.7	96.7	96.7	96.7
≥ 300	54.0	81.3	90.0	90.7	94.0	96.7	96.7	97.3	97.3	97.3	97.3	97.3	97.3	97.3
≥ 200	54.0	81.3	90.0	90.7	94.0	97.3	97.3	98.0	98.0	98.0	98.0	98.0	98.0	98.0
≥ 100	54.0	81.3	90.0	90.7	94.0	97.3	97.3	98.0	98.0	98.0	98.0	98.0	98.0	98.0
0	54.0	81.3	90.0	90.7	94.0	97.3	97.3	98.0	98.0	98.0	98.0	98.0	98.0	98.0

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

APR

STATION NAME

YEARS

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

16

HOURLY (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)															
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ ⅓	≥ ⅒	≥ ⅛	≥ 0
NO CEILING	31.3	44.7	46.0	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7
≥ 20000	33.3	49.3	50.7	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3
≥ 18000	33.3	49.3	50.7	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3
≥ 16000	33.3	49.3	50.7	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3
≥ 14000	33.3	49.3	50.7	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3
≥ 12000	33.3	49.3	50.7	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3
≥ 10000	34.7	53.3	55.3	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 9000	34.7	53.3	55.3	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 8000	34.7	54.7	56.7	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3
≥ 7000	35.3	55.3	57.3	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0
≥ 6000	39.3	61.3	63.3	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
≥ 5000	40.0	62.0	64.7	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3
≥ 4500	40.7	64.0	66.7	67.3	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
≥ 4000	44.0	72.0	74.7	75.3	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0
≥ 3500	47.3	76.7	79.3	80.0	80.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
≥ 3000	51.3	82.0	84.7	85.3	86.7	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
≥ 2500	51.3	82.7	85.3	86.0	87.3	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0
≥ 2000	52.0	84.0	86.7	87.3	89.3	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
≥ 1800	52.7	84.7	87.3	88.0	90.0	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7
≥ 1500	52.7	85.3	88.0	88.7	90.7	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3
≥ 1200	52.7	86.0	88.7	89.3	91.3	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0
≥ 1000	52.7	86.7	92.0	92.7	94.7	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3
≥ 900	52.7	88.7	92.0	92.7	94.7	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3
≥ 800	52.7	88.7	92.0	92.7	94.7	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3
≥ 700	52.7	88.7	92.0	92.7	94.7	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 600	52.7	88.7	92.0	92.7	94.7	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 500	52.7	88.7	92.0	92.7	94.7	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 400	52.7	89.3	92.7	93.3	95.3	96.7	97.3	97.3	97.3	97.3	98.0	98.0	98.0	98.0	98.0	98.0
≥ 300	52.7	89.3	92.7	93.3	95.3	97.3	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
≥ 200	52.7	89.3	92.7	93.3	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
≥ 100	52.7	89.3	92.7	93.3	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
0	52.7	89.3	92.7	93.3	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET SMOS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

APR  
MONTH

19  
HOURS (L.S.T.)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ 5/16	≥ ¼	≥ 0
NO CEILING	34.0	52.7	54.0	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7
≥ 20000	38.7	61.3	62.7	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3
≥ 18000	38.7	61.3	62.7	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3
≥ 16000	38.7	61.3	62.7	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3
≥ 14000	39.3	62.0	63.3	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
≥ 12000	39.3	63.3	64.7	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3
≥ 10000	42.0	66.0	67.3	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
≥ 9000	42.0	66.7	68.0	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7
≥ 8000	43.3	71.3	72.7	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3
≥ 7000	43.3	72.0	73.3	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0
≥ 6000	44.0	74.0	75.3	76.0	76.7	76.7	76.7	76.7	76.7	76.7	76.7	76.7	76.7	76.7
≥ 5000	44.7	75.3	76.7	77.3	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
≥ 4500	45.0	77.3	78.7	79.3	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
≥ 4000	47.3	79.3	80.7	81.3	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0
≥ 3500	48.0	81.3	82.7	84.0	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7
≥ 3000	48.7	83.3	84.7	86.0	87.3	88.0	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
≥ 2500	48.7	84.0	86.0	87.3	88.7	89.3	90.0	90.0	90.0	90.7	90.7	90.7	90.7	90.7
≥ 2000	49.3	84.7	86.7	88.0	89.3	90.0	90.7	90.7	91.3	91.3	91.3	91.3	91.3	91.3
≥ 1800	49.3	84.7	86.7	88.0	89.3	90.0	90.7	90.7	91.3	91.3	91.3	91.3	91.3	91.3
≥ 1500	49.3	85.3	88.0	89.3	90.7	91.3	92.0	92.0	92.0	92.7	92.7	92.7	92.7	92.7
≥ 1200	49.3	85.3	88.0	89.3	90.7	91.3	92.0	92.0	92.0	92.7	92.7	92.7	92.7	92.7
≥ 1000	49.3	86.7	89.3	90.7	92.0	94.0	94.7	94.7	94.7	95.3	95.3	95.3	95.3	95.3
≥ 900	49.3	86.7	89.3	90.7	92.0	94.0	94.7	94.7	94.7	95.3	95.3	95.3	95.3	95.3
≥ 800	49.3	86.7	89.3	90.7	92.0	94.0	94.7	94.7	94.7	96.0	96.0	96.0	96.0	96.0
≥ 700	49.3	86.7	89.3	90.7	92.0	94.0	94.7	94.7	94.7	96.0	96.0	96.0	96.0	96.0
≥ 600	49.3	86.7	89.3	90.7	92.0	94.0	94.7	94.7	94.7	96.0	96.0	96.0	96.0	96.0
≥ 500	49.3	86.7	89.3	90.7	92.0	94.0	94.7	94.7	94.7	96.7	96.7	96.7	96.7	96.7
≥ 400	49.3	86.7	89.3	91.3	92.7	94.7	95.3	96.0	96.0	98.0	98.7	98.7	98.7	98.7
≥ 300	49.3	86.7	89.3	91.3	92.7	94.7	95.3	96.0	96.0	98.7	99.3	99.3	99.3	99.3
≥ 200	49.3	86.7	89.3	91.3	92.7	94.7	95.3	96.0	96.0	98.7	99.3	99.3	99.3	99.3
≥ 100	49.3	86.7	89.3	91.3	92.7	94.7	95.3	96.0	96.0	98.7	99.3	99.3	99.3	99.3
≥ 0	49.3	86.7	89.3	91.3	92.7	94.7	95.3	96.0	96.0	98.7	99.3	99.3	99.3	99.3

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

APR

STATION NAME

YEARS

MORNING

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

22  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	49.3	56.7	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3
≥ 20000	54.7	63.3	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
≥ 18000	54.7	63.3	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
≥ 16000	54.7	63.3	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
≥ 14000	54.7	63.3	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
≥ 12000	56.7	66.7	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
≥ 10000	59.3	70.7	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0
≥ 9000	59.3	70.7	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0
≥ 8000	63.3	76.0	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3
≥ 7000	63.3	76.0	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3
≥ 6000	64.7	78.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
≥ 5000	65.3	79.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
≥ 4500	65.3	79.3	81.3	81.3	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0
≥ 4000	65.3	80.0	83.3	83.3	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0
≥ 3500	66.7	81.3	84.7	84.7	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3
≥ 3000	67.3	83.3	86.7	86.7	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
≥ 2500	68.7	84.7	88.0	88.0	88.7	89.3	89.3	89.3	89.3	89.3	89.3	89.3	89.3	89.3
≥ 2000	68.7	85.3	89.3	89.3	90.0	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7
≥ 1800	68.7	85.3	89.3	89.3	90.0	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7
≥ 1600	69.3	86.7	91.3	91.3	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7
≥ 1400	69.3	86.7	91.3	91.3	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7
≥ 1200	69.3	86.7	91.3	91.3	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7
≥ 1000	69.3	86.7	91.3	91.3	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7
≥ 900	69.3	86.7	91.3	91.3	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7
≥ 800	69.3	86.7	91.3	91.3	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7
≥ 700	69.3	86.7	91.3	92.0	92.7	94.0	94.0	94.7	94.7	94.7	94.7	94.7	94.7	94.7
≥ 600	69.3	86.7	91.3	92.0	92.7	94.7	94.7	95.3	95.3	95.3	95.3	95.3	95.3	95.3
≥ 500	69.3	86.7	91.3	92.7	93.3	95.3	95.3	96.7	96.7	96.7	96.7	96.7	96.7	96.7
≥ 400	69.3	86.7	91.3	92.7	93.3	95.3	95.3	96.7	96.7	96.7	96.7	96.7	96.7	96.7
≥ 300	69.3	86.7	91.3	92.7	93.3	95.3	95.3	96.7	96.7	96.7	96.7	96.7	96.7	96.7
≥ 200	69.3	86.7	91.3	92.7	93.3	95.3	95.3	96.7	96.7	96.7	96.7	96.7	96.7	96.7
≥ 100	69.3	86.7	91.3	92.7	93.3	95.3	95.3	96.7	96.7	96.7	96.7	96.7	96.7	96.7
0	69.3	86.7	91.3	92.7	93.3	95.3	95.3	96.7	96.7	96.7	96.7	96.7	96.7	96.7

150

TOTAL NUMBER OF OBSERVATIONS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

APR  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

ALL  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	37.5	50.3	51.4	51.9	52.1	52.1	52.1	52.2	52.2	52.2	52.2	52.2	52.2
≥ 20000	40.6	55.3	56.9	57.5	57.7	57.7	57.7	57.8	57.8	57.8	57.8	57.8	57.8
≥ 18000	40.6	55.3	56.9	57.5	57.7	57.7	57.7	57.8	57.8	57.8	57.8	57.8	57.8
≥ 16000	40.6	55.3	56.9	57.5	57.7	57.7	57.7	57.8	57.8	57.8	57.8	57.8	57.8
≥ 14000	41.0	55.9	57.6	58.2	58.3	58.3	58.3	58.4	58.4	58.4	58.4	58.4	58.4
≥ 12000	41.9	57.5	59.2	59.8	59.9	59.9	59.9	60.0	60.0	60.0	60.0	60.0	60.0
≥ 10000	44.1	61.2	63.1	63.7	63.9	63.9	63.9	64.0	64.0	64.0	64.0	64.0	64.0
≥ 9000	44.4	61.7	63.8	64.3	64.6	64.6	64.6	64.7	64.7	64.7	64.7	64.7	64.7
≥ 8000	46.1	65.4	67.7	68.3	68.6	68.6	68.6	68.7	68.7	68.7	68.7	68.7	68.7
≥ 7000	46.3	66.0	68.3	68.8	69.2	69.2	69.2	69.3	69.3	69.3	69.3	69.3	69.3
≥ 6000	47.8	68.8	71.3	71.9	72.3	72.3	72.3	72.4	72.5	72.5	72.5	72.5	72.5
≥ 5000	48.7	70.0	72.6	73.5	74.0	74.1	74.1	74.2	74.3	74.3	74.3	74.3	74.3
≥ 4500	49.7	71.6	74.5	75.2	75.8	75.9	75.9	76.0	76.1	76.1	76.1	76.1	76.1
≥ 4000	51.5	74.3	77.6	78.3	78.9	79.0	79.0	79.1	79.2	79.2	79.2	79.2	79.2
≥ 3500	53.0	76.6	79.8	80.6	81.4	81.6	81.7	81.8	81.8	81.8	81.8	81.8	81.8
≥ 3000	54.6	79.5	83.0	83.8	84.9	85.2	85.4	85.5	85.6	85.6	85.6	85.6	85.6
≥ 2500	55.2	80.7	84.3	85.1	86.3	86.6	86.8	87.0	87.1	87.2	87.2	87.2	87.2
≥ 2000	55.9	81.9	85.9	86.8	88.1	88.6	88.9	89.2	89.3	89.3	89.3	89.3	89.3
≥ 1800	56.0	82.1	86.1	86.9	88.3	88.8	89.1	89.3	89.4	89.5	89.5	89.5	89.5
≥ 1500	56.3	83.0	87.3	88.2	89.5	90.0	90.3	90.6	90.7	90.8	90.8	90.8	90.8
≥ 1200	56.3	83.2	87.7	88.5	89.8	90.3	90.8	91.1	91.2	91.3	91.3	91.3	91.3
≥ 1000	56.3	84.1	88.8	89.7	91.3	92.0	92.6	92.8	92.9	93.0	93.2	93.2	93.2
≥ 900	56.3	84.1	88.8	89.7	91.3	92.0	92.6	92.8	92.9	93.0	93.2	93.2	93.2
≥ 800	56.4	84.2	89.2	90.2	91.8	92.6	93.4	93.7	93.8	94.0	94.2	94.2	94.2
≥ 700	56.4	84.3	89.3	90.3	92.0	93.2	93.8	94.2	94.3	94.5	94.7	94.8	94.8
≥ 600	56.5	84.4	89.4	90.5	92.4	93.8	94.7	95.0	95.2	95.4	95.6	95.7	95.7
≥ 500	56.5	84.4	89.6	90.9	92.8	94.3	95.3	95.6	95.8	96.2	96.4	96.5	96.5
≥ 400	56.5	84.5	89.7	91.1	93.1	94.6	95.8	96.2	96.3	96.8	97.2	97.3	97.3
≥ 300	56.5	84.6	89.8	91.3	93.3	94.9	96.3	96.8	96.9	97.6	98.1	98.2	98.2
≥ 200	56.5	84.6	89.8	91.3	93.4	95.2	96.6	97.1	97.3	97.9	98.6	98.8	98.8
≥ 100	56.5	84.6	89.8	91.3	93.4	95.2	96.6	97.1	97.3	97.9	98.6	98.8	98.8
0	56.5	84.6	89.8	91.3	93.4	95.2	96.6	97.1	97.3	97.9	98.6	98.8	98.8

1200

TOTAL NUMBER OF OBSERVATIONS

DIRNAVOCEANMET SMOS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

TELETYPE

MAY  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

01  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 0
NO CEILING	34.8	45.2	49.0	50.3	51.0	51.0	51.0	51.6	52.3	52.3	52.3	52.3	52.3
≥ 20000	40.7	52.3	56.1	57.4	58.1	58.1	58.7	59.4	59.4	60.0	60.0	60.0	60.7
≥ 18000	40.7	52.9	56.8	58.1	58.7	58.7	59.4	60.0	60.0	60.7	60.7	60.7	61.3
≥ 16000	40.7	52.9	56.8	58.1	58.7	58.7	59.4	60.0	60.0	60.7	60.7	60.7	61.3
≥ 14000	40.7	52.9	56.8	58.1	58.7	58.7	59.4	60.0	60.0	60.7	60.7	60.7	61.3
≥ 12000	41.3	53.6	57.4	58.7	59.4	59.4	60.0	60.7	60.7	61.3	61.3	61.3	61.9
≥ 10000	43.2	56.1	60.7	61.9	63.2	63.2	63.9	64.5	64.5	65.2	65.2	65.2	65.8
≥ 9000	43.9	56.8	61.3	62.6	63.9	63.9	64.5	65.2	65.2	65.8	65.8	65.8	66.5
≥ 8000	45.8	60.7	65.2	66.5	67.7	67.7	68.4	69.0	69.0	69.7	69.7	69.7	70.3
≥ 7000	46.5	61.3	65.8	67.1	68.4	68.4	69.0	69.7	69.7	70.3	70.3	70.3	71.0
≥ 6000	47.1	62.6	67.1	68.4	69.7	69.7	70.3	71.0	71.0	71.6	71.6	71.6	72.3
≥ 5000	49.7	66.5	71.0	72.3	73.6	74.2	74.8	75.5	75.5	76.1	76.1	76.1	76.8
≥ 4500	51.0	68.4	72.9	74.2	75.5	76.1	76.8	77.4	77.4	78.1	78.1	78.1	78.7
≥ 4000	51.6	69.0	73.6	74.8	76.1	76.8	77.4	78.1	78.1	78.7	78.7	78.7	79.4
≥ 3500	51.6	69.7	74.2	75.5	76.8	77.4	78.1	78.7	78.7	79.4	79.4	79.4	80.0
≥ 3000	52.3	71.6	76.8	78.1	80.0	80.7	81.3	81.9	81.9	82.6	82.6	82.6	83.2
≥ 2500	52.3	71.6	76.8	78.1	80.0	80.7	81.3	81.9	81.9	82.6	82.6	82.6	83.2
≥ 2000	52.3	73.6	78.7	80.0	82.6	83.2	84.5	85.2	85.2	85.8	85.8	85.8	86.5
≥ 1800	52.3	73.6	78.7	80.0	82.6	83.2	84.5	85.2	85.2	85.8	85.8	85.8	86.5
≥ 1500	52.3	73.6	79.4	80.7	83.2	83.9	85.2	86.5	86.5	87.1	87.1	87.1	87.7
≥ 1200	52.3	73.6	80.0	81.3	83.9	84.5	85.8	87.1	87.1	87.7	87.7	87.7	88.4
≥ 1000	52.3	74.2	80.7	81.9	85.2	85.8	87.1	88.4	88.4	89.0	89.0	89.0	89.7
≥ 900	52.3	74.2	81.9	83.2	86.5	87.1	88.4	89.7	89.7	90.3	90.3	90.3	91.0
≥ 800	52.3	74.2	81.9	83.2	87.1	87.7	89.0	91.0	91.0	91.6	91.6	91.6	92.3
≥ 700	52.3	74.2	81.9	83.2	87.1	87.7	90.3	91.6	91.6	92.3	92.3	92.3	92.9
≥ 600	52.3	74.2	81.9	83.2	87.1	87.7	91.0	92.3	92.3	92.9	92.9	92.9	93.6
≥ 500	52.3	74.2	81.9	83.9	88.4	89.0	93.6	94.8	94.8	95.5	95.5	95.5	96.8
≥ 400	52.3	74.2	81.9	83.9	88.4	89.0	93.6	94.8	94.8	95.5	95.5	95.5	96.8
≥ 300	52.3	74.2	81.9	83.9	88.4	89.7	94.2	96.1	96.1	96.8	96.8	96.8	98.1
≥ 200	52.3	74.2	81.9	83.9	88.4	89.7	94.2	96.8	96.8	97.4	97.4	97.4	98.7
≥ 100	52.3	74.2	81.9	83.9	88.4	89.7	94.2	96.8	96.8	97.4	97.4	97.4	98.7
0	52.3	74.2	81.9	83.9	88.4	89.7	94.2	96.8	96.8	97.4	97.4	97.4	98.7

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

CLASS

MAY  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

04  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2 1/2	≥ 2	≥ 1 1/2	≥ 1	≥ 3/4	≥ 1/2	≥ 5/16	≥ 1/4	≥ 0
NO CEILING	30.3	41.3	43.9	44.5	47.1	48.4	49.0	50.3	51.5	51.5	51.5	51.5	51.5	51.5
≥ 20000	32.9	43.8	46.4	49.0	51.6	52.9	53.6	54.8	56.1	56.1	56.1	56.1	56.1	56.1
≥ 18000	32.9	43.8	46.4	49.0	51.6	52.9	53.6	54.8	56.1	56.1	56.1	56.1	56.1	56.1
≥ 16000	32.9	43.8	46.4	49.7	52.3	53.6	54.2	55.5	56.8	56.8	56.8	56.8	56.8	56.8
≥ 14000	32.9	43.8	46.4	49.7	52.3	53.6	54.2	55.5	56.8	56.8	56.8	56.8	56.8	56.8
≥ 12000	34.2	47.7	50.3	51.6	54.2	55.5	56.1	57.4	58.7	58.7	58.7	58.7	58.7	58.7
≥ 10000	37.4	51.0	53.6	55.5	58.1	59.4	60.7	61.9	63.2	63.2	63.2	63.2	63.2	63.2
≥ 9000	38.1	52.3	54.8	56.8	59.4	60.7	61.9	63.2	64.5	64.5	64.5	64.5	64.5	64.5
≥ 8000	39.4	53.5	56.1	58.1	60.7	62.4	63.2	64.5	65.8	65.8	65.8	65.8	65.8	65.8
≥ 7000	40.0	56.1	58.7	60.7	63.2	64.5	65.8	67.1	68.4	68.4	68.4	68.4	68.4	68.4
≥ 6000	40.0	56.8	59.4	61.3	64.5	65.8	67.1	68.4	69.7	69.7	69.7	69.7	69.7	69.7
≥ 5000	43.2	60.7	63.2	65.2	68.4	69.7	71.0	72.3	73.6	73.6	73.6	73.6	73.6	73.6
≥ 4500	43.9	61.9	64.5	66.5	69.7	71.0	72.3	73.6	75.5	75.5	75.5	75.5	75.5	75.5
≥ 4000	44.5	63.2	65.8	68.4	71.6	72.9	74.2	75.5	77.4	77.4	77.4	77.4	77.4	77.4
≥ 3500	44.5	63.2	65.8	69.0	72.3	73.6	74.8	76.1	78.1	78.1	78.1	78.1	78.1	78.1
≥ 3000	45.2	63.9	66.5	71.0	74.2	75.5	76.8	78.7	80.7	80.7	80.7	80.7	80.7	80.7
≥ 2500	46.5	65.2	67.7	72.3	75.5	76.8	78.7	80.7	82.6	82.6	82.6	82.6	82.6	82.6
≥ 2000	47.1	67.1	69.7	74.2	78.1	79.4	81.3	83.2	85.2	85.2	85.2	85.2	85.2	85.2
≥ 1800	47.1	67.1	69.7	74.2	78.1	79.4	81.3	83.2	85.2	85.2	85.2	85.2	85.2	85.2
≥ 1500	47.1	67.1	70.3	74.8	78.7	80.0	81.9	83.9	85.8	85.8	85.8	85.8	85.8	85.8
≥ 1200	47.7	67.7	71.0	75.5	79.4	80.7	82.6	84.5	86.5	86.5	86.5	86.5	86.5	86.5
≥ 1000	48.4	69.0	72.9	78.1	81.9	83.2	85.2	87.1	89.0	89.0	89.0	89.0	89.0	89.0
≥ 900	48.4	69.0	72.9	78.1	81.9	83.2	85.2	87.1	89.0	89.0	89.0	89.0	89.0	89.0
≥ 800	48.4	69.0	73.6	78.7	82.6	83.9	85.8	87.7	89.7	89.7	89.7	89.7	89.7	89.7
≥ 700	48.4	69.0	73.6	78.7	83.2	84.5	86.5	88.4	90.3	90.3	90.3	90.3	90.3	90.3
≥ 600	48.4	69.0	73.6	78.7	83.2	84.5	86.5	88.4	91.0	91.0	91.0	91.0	91.0	91.0
≥ 500	48.4	69.0	73.6	78.7	83.2	85.8	88.4	91.0	93.6	93.6	93.6	94.2	94.2	94.2
≥ 400	48.4	69.0	73.6	78.7	83.9	86.5	89.0	91.6	94.2	94.2	94.2	94.8	94.8	94.8
≥ 300	48.4	69.0	73.6	78.7	83.9	86.5	90.3	93.6	96.1	96.1	96.1	96.8	96.8	96.8
≥ 200	48.4	69.0	73.6	78.7	83.9	86.5	90.3	93.6	96.1	96.1	96.1	96.8	96.8	96.8
≥ 100	48.4	69.0	73.6	78.7	83.9	86.5	90.3	93.6	96.1	96.1	96.1	96.8	96.8	96.8
0	48.4	69.0	73.6	78.7	83.9	86.5	90.3	93.6	96.1	96.1	96.1	97.4	97.4	97.4

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEAR

MAY  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

07  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)														
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	≥ 0
NO CEILING	29.0	43.9	45.8	46.5	51.0	51.6	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3
≥ 20000	29.7	46.5	49.0	49.7	55.5	56.1	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 18000	29.7	46.5	49.0	49.7	55.5	56.1	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 16000	29.7	46.5	49.0	49.7	55.5	56.1	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 14000	29.7	46.5	49.0	49.7	55.5	56.1	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 12000	30.3	47.1	49.7	50.3	56.1	56.8	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4
≥ 10000	30.3	51.0	53.6	54.2	62.6	63.2	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9
≥ 9000	30.3	51.6	54.2	56.1	63.9	64.5	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2
≥ 8000	31.0	56.1	59.4	61.3	69.0	69.7	70.3	70.3	70.3	71.0	71.0	71.0	71.0	71.0	71.0
≥ 7000	31.0	56.8	60.0	61.9	69.7	70.3	71.0	71.0	71.0	71.6	71.6	71.6	71.6	71.6	71.6
≥ 6000	31.0	58.1	61.9	64.5	72.3	72.9	73.6	73.6	74.2	74.2	74.2	74.2	74.2	74.2	74.2
≥ 5000	31.0	58.1	62.6	65.2	72.9	73.6	74.2	74.2	74.2	75.5	75.5	75.5	75.5	75.5	75.5
≥ 4500	31.0	58.1	62.6	65.2	72.9	73.6	74.2	74.2	74.2	75.5	75.5	75.5	75.5	75.5	75.5
≥ 4000	32.3	60.7	65.2	67.7	76.1	76.8	77.4	77.4	77.4	78.7	78.7	78.7	78.7	78.7	78.7
≥ 3500	32.9	61.3	66.5	69.0	77.4	78.1	78.7	78.7	78.7	80.0	80.0	80.0	80.0	80.0	80.0
≥ 3000	32.9	61.3	66.5	69.0	77.4	78.1	78.7	80.0	80.0	81.3	81.3	81.3	81.3	81.3	81.3
≥ 2500	32.9	61.9	67.1	69.7	78.1	78.7	79.4	80.7	80.7	81.9	81.9	81.9	81.9	81.9	81.9
≥ 2000	32.9	61.9	67.7	70.3	78.7	79.4	80.7	81.9	81.9	83.2	83.2	83.2	83.2	83.2	83.2
≥ 1800	32.9	61.9	67.7	70.3	78.7	79.4	80.7	81.9	81.9	83.2	83.2	83.2	83.2	83.2	83.2
≥ 1500	32.9	63.2	69.0	71.6	80.7	81.3	82.6	83.9	83.9	85.2	85.2	85.2	85.2	85.2	85.2
≥ 1200	32.9	63.2	69.0	71.6	81.3	81.9	83.2	85.2	85.2	86.5	86.5	86.5	86.5	86.5	86.5
≥ 1000	32.9	63.2	69.0	72.3	81.9	83.2	85.2	86.5	86.5	87.7	87.7	87.7	87.7	87.7	87.7
≥ 900	32.9	63.2	69.0	72.3	81.9	83.2	85.2	86.5	86.5	87.7	87.7	87.7	87.7	87.7	87.7
≥ 800	32.9	63.2	69.0	72.3	82.6	83.9	85.2	86.5	86.5	87.7	87.7	87.7	87.7	87.7	87.7
≥ 700	32.9	63.2	69.0	72.3	82.6	83.9	85.2	86.5	86.5	87.7	87.7	87.7	87.7	87.7	87.7
≥ 600	33.6	64.5	70.3	74.2	83.9	85.2	87.1	88.4	88.4	90.3	90.3	90.3	90.3	90.3	90.3
≥ 500	33.6	64.5	70.3	74.2	83.9	85.2	87.1	88.4	88.4	90.3	90.3	90.3	90.3	90.3	90.3
≥ 400	33.6	64.5	70.3	74.2	83.9	85.2	87.1	88.4	88.4	90.3	90.3	90.3	90.3	90.3	90.3
≥ 300	33.6	64.5	70.3	74.2	84.5	85.8	89.7	91.6	91.6	94.2	94.2	94.2	94.2	94.2	94.2
≥ 200	33.6	64.5	70.3	74.2	84.5	85.8	89.7	91.6	91.6	94.2	94.2	94.2	94.2	94.2	94.2
≥ 100	33.6	64.5	70.3	74.2	84.5	85.8	89.7	91.6	91.6	94.2	94.2	94.2	94.2	94.2	94.2
0	33.6	64.5	70.3	74.2	84.5	85.8	89.7	91.6	91.6	94.2	94.2	94.2	94.2	94.2	94.2

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

MAY  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

10  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾
NO CEILING	30.3	45.2	47.7	48.4	49.0	49.0	49.7	49.7	49.7	49.7	49.7
≥ 20000	34.8	51.0	53.6	54.2	55.5	55.5	56.8	56.8	56.8	56.8	56.8
≥ 18000	34.8	51.0	53.6	54.2	55.5	55.5	56.8	56.8	56.8	56.8	56.8
≥ 16000	34.8	51.0	53.6	54.2	55.5	55.5	56.8	56.8	56.8	56.8	56.8
≥ 14000	34.8	51.0	53.6	54.2	55.5	55.5	56.8	56.8	56.8	56.8	56.8
≥ 12000	35.5	51.6	54.2	54.8	56.1	56.1	57.4	57.4	57.4	57.4	57.4
≥ 10000	36.1	54.2	57.4	58.1	59.4	59.4	60.7	60.7	60.7	60.7	60.7
≥ 9000	36.1	54.2	57.4	58.1	59.4	59.4	60.7	60.7	60.7	60.7	60.7
≥ 8000	37.4	56.8	60.0	60.7	61.9	61.9	63.2	63.2	63.2	63.2	63.2
≥ 7000	37.4	56.8	60.0	60.7	61.9	61.9	63.2	63.2	63.2	63.2	63.2
≥ 6000	37.4	57.4	61.3	61.9	63.2	63.2	64.5	64.5	64.5	64.5	64.5
≥ 5000	37.4	58.7	62.6	63.2	65.2	65.2	66.5	66.5	66.5	66.5	66.5
≥ 4500	38.1	60.7	64.5	65.2	67.1	67.1	68.4	68.4	68.4	68.4	68.4
≥ 4000	39.4	63.9	67.7	68.4	70.3	70.3	71.6	71.6	71.6	71.6	71.6
≥ 3500	40.0	64.5	68.4	69.0	71.0	71.0	72.3	72.3	72.3	72.3	72.3
≥ 3000	42.6	69.7	74.8	76.1	78.1	78.1	80.0	80.0	80.0	80.0	80.0
≥ 2500	43.2	71.0	76.1	77.4	79.4	79.4	81.3	81.3	81.3	81.3	81.3
≥ 2000	43.9	72.9	78.1	79.4	81.9	81.9	83.9	83.9	83.9	83.9	83.9
≥ 1800	43.9	72.9	78.1	79.4	81.9	81.9	83.9	83.9	83.9	83.9	83.9
≥ 1500	43.9	73.6	78.7	80.0	82.6	82.6	85.2	85.2	85.2	85.2	85.2
≥ 1200	43.9	74.2	79.4	81.3	83.9	83.9	86.5	86.5	86.5	86.5	86.5
≥ 1000	43.9	76.1	81.9	83.9	87.1	87.1	90.3	90.3	90.3	90.3	90.3
≥ 900	43.9	76.1	81.9	83.9	87.1	87.1	90.3	90.3	90.3	90.3	90.3
≥ 800	43.9	76.1	81.9	83.9	87.1	87.1	90.3	90.3	90.3	90.3	90.3
≥ 700	43.9	76.1	81.9	83.9	87.1	87.1	90.3	90.3	90.3	90.3	90.3
≥ 600	43.9	76.1	81.9	83.9	87.1	87.1	90.3	90.3	90.3	90.3	90.3
≥ 500	43.9	76.1	83.2	85.8	89.0	89.0	93.6	93.6	94.2	94.2	94.2
≥ 400	43.9	76.1	83.2	85.8	89.7	89.7	96.1	96.1	96.8	96.8	96.8
≥ 300	43.9	76.1	83.2	85.8	89.7	89.7	96.1	96.1	96.8	96.8	96.8
≥ 200	43.9	76.1	83.2	85.8	89.7	89.7	96.1	96.1	96.8	96.8	96.8
≥ 100	43.9	76.1	83.2	85.8	89.7	89.7	96.1	96.1	96.8	96.8	96.8
0	43.9	76.1	83.2	85.8	89.7	89.7	96.1	96.1	96.8	96.8	96.8

TOTAL NUMBER OF OBSERVATIONS 155

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

MAY

STATION

STATION NAME

YEARS

MAY

MAY

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

HOURS (L.S.T.)  
13

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	22.6	32.9	37.4	37.4	38.1	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7
≥ 20000	27.1	39.4	43.9	44.5	45.2	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8
≥ 18000	27.1	39.4	43.9	44.5	45.2	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8
≥ 16000	27.1	39.4	43.9	44.5	45.2	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8
≥ 14000	27.7	40.0	44.5	45.2	45.8	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5
≥ 12000	27.7	40.7	45.2	45.8	46.5	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
≥ 10000	29.7	45.2	49.7	50.3	51.0	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
≥ 9000	29.7	45.2	49.7	50.3	51.0	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
≥ 8000	29.7	47.7	52.3	53.6	54.2	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8
≥ 7000	29.7	47.7	52.3	53.6	54.2	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8
≥ 6000	29.7	49.0	53.6	54.8	55.5	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1
≥ 5000	29.7	50.3	54.8	56.1	56.8	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4
4500	31.6	53.6	58.1	59.4	60.0	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7
4000	34.2	59.4	63.9	65.2	65.8	66.5	67.1	67.1	67.1	67.1	67.1	67.1	67.1	67.1
3500	36.8	63.9	68.4	69.7	70.3	71.0	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6
3000	36.7	67.7	72.3	74.2	74.8	75.5	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1
2500	40.7	71.0	75.5	78.1	78.7	79.4	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
2000	40.7	74.8	81.3	84.5	85.2	85.8	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5
1800	40.7	74.8	81.3	84.5	85.8	86.5	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1
1500	40.7	76.8	83.9	87.1	88.4	89.7	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3
1200	40.7	76.8	84.5	89.0	90.3	91.6	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9
1000	40.7	76.8	85.2	89.7	91.6	92.9	94.2	94.2	94.2	94.2	94.2	94.2	94.2	94.2
900	40.7	76.8	85.2	89.7	91.6	92.9	94.2	94.2	94.2	94.2	94.2	94.2	94.2	94.2
800	40.7	76.8	85.2	89.7	92.3	93.6	94.8	94.8	94.8	94.8	94.8	94.8	94.8	94.8
700	40.7	76.8	85.2	89.7	92.3	93.6	94.8	94.8	94.8	94.8	94.8	94.8	94.8	94.8
600	40.7	76.8	85.2	89.7	92.9	94.2	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5
500	40.7	76.8	85.2	89.7	93.6	95.5	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8
400	40.7	76.8	85.2	89.7	93.6	95.5	97.4	98.1	98.1	98.1	98.1	98.1	98.1	98.1
300	40.7	76.8	85.2	89.7	94.2	96.8	98.7	99.4	99.4	99.4	99.4	99.4	99.4	99.4
200	40.7	76.8	85.2	89.7	94.2	96.8	98.7	99.4	99.4	99.4	99.4	99.4	99.4	99.4
100	40.7	76.8	85.2	89.7	94.2	96.8	98.7	99.4	99.4	99.4	99.4	99.4	99.4	99.4
0	40.7	76.8	85.2	89.7	94.2	96.8	98.7	99.4	99.4	99.4	99.4	99.4	99.4	99.4

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

MAY  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

16  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ 5/16	≥ ¼
NO CEILING	23.2	32.9	33.5	37.4	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1
≥ 20000	29.0	41.9	44.5	46.5	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7
18000	29.7	42.6	45.2	47.1	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4
16000	29.7	42.6	45.2	47.1	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4
14000	29.7	43.2	45.8	47.7	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0
12000	31.0	46.5	49.0	51.0	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3
10000	31.0	48.4	51.0	53.6	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8
9000	31.0	48.4	51.0	53.6	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8
8000	32.3	52.3	54.8	57.4	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7
7000	32.9	52.9	55.5	58.1	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4
6000	32.9	53.6	56.8	60.0	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3
5000	33.6	55.5	58.7	62.6	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9
4500	34.2	58.1	62.6	66.5	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7
4000	36.8	62.6	67.7	71.6	72.9	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6
3500	38.1	65.2	71.0	74.8	76.1	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8
3000	40.0	68.4	75.5	80.0	81.9	82.6	82.6	82.6	82.6	82.6	82.6	82.6	82.6
2500	40.0	69.0	76.1	80.7	83.2	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
2000	40.0	69.7	78.7	83.2	85.8	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5
1800	40.0	69.7	80.0	84.5	87.1	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
1500	40.0	71.0	81.9	86.5	89.0	89.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7
1200	40.0	71.0	81.9	87.1	89.7	90.3	91.0	91.0	91.0	91.0	91.0	91.0	91.0
1000	40.0	71.6	83.2	89.0	91.6	92.3	92.9	93.6	93.6	93.6	93.6	93.6	93.6
900	40.0	71.6	83.2	89.0	91.6	92.3	92.9	93.6	93.6	93.6	93.6	93.6	93.6
800	40.0	71.6	83.9	91.0	94.2	95.5	96.1	96.8	96.8	96.8	96.8	96.8	96.8
700	40.0	71.6	83.9	91.0	94.2	95.5	96.1	96.8	96.8	96.8	96.8	96.8	96.8
600	40.0	71.6	83.9	91.0	94.2	95.5	96.1	96.8	96.8	96.8	96.8	96.8	96.8
500	40.0	71.6	83.9	91.0	95.5	96.8	97.4	98.1	98.1	98.1	98.1	98.1	98.1
400	40.0	71.6	83.9	91.0	95.5	96.8	98.1	99.4	99.4	99.4	99.4	99.4	99.4
300	40.0	71.6	83.9	91.0	96.1	97.4	98.7	100.0	100.0	100.0	100.0	100.0	100.0
200	40.0	71.6	83.9	91.0	96.1	97.4	98.7	100.0	100.0	100.0	100.0	100.0	100.0
100	40.0	71.6	83.9	91.0	96.1	97.4	98.7	100.0	100.0	100.0	100.0	100.0	100.0
0	40.0	71.6	83.9	91.0	96.1	97.4	98.7	100.0	100.0	100.0	100.0	100.0	100.0

TOTAL NUMBER OF OBSERVATIONS

135

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

MAY  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

19  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	26.5	40.7	43.2	45.2	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
≥ 20000	27.7	45.2	47.7	50.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3
AI 18000	27.7	45.8	48.4	51.0	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
AI 16000	27.7	45.8	48.4	51.0	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
AI 14000	27.7	46.5	49.0	51.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6
AI 12000	29.7	49.7	52.9	55.5	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4
AI 10000	30.3	51.6	55.5	58.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7
AI 9000	30.3	51.6	55.5	58.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7
AI 8000	32.3	54.8	58.7	61.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9
AI 7000	32.3	55.5	59.4	62.6	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5
AI 6000	32.3	58.1	61.9	65.8	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7
AI 5000	32.3	60.0	63.9	67.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7
AI 4500	33.6	61.9	65.8	69.7	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3
AI 4000	34.2	64.5	69.7	73.6	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1
AI 3500	34.8	65.8	71.6	75.5	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7
AI 3000	35.5	68.4	74.6	80.0	83.9	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5
AI 2500	35.5	69.0	75.5	80.7	85.2	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
AI 2000	35.5	70.3	77.4	83.9	88.4	89.0	89.7	89.7	89.7	89.7	89.7	89.7	89.7
AI 1800	35.5	70.3	78.1	84.5	89.0	89.7	90.3	90.3	90.3	90.3	90.3	90.3	90.3
AI 1500	35.5	71.0	78.7	85.2	89.7	90.3	91.0	91.0	91.0	91.0	91.0	91.0	91.0
AI 1200	35.5	71.0	78.7	85.2	90.3	91.0	91.6	91.6	91.6	91.6	91.6	91.6	91.6
AI 1000	35.5	71.0	78.7	85.8	91.6	92.3	92.9	92.9	92.9	92.9	92.9	92.9	92.9
AI 900	35.5	71.0	78.7	85.8	91.6	92.3	92.9	92.9	92.9	92.9	92.9	92.9	92.9
AI 800	35.5	71.0	79.4	86.5	93.6	94.2	94.8	94.8	94.8	94.8	94.8	94.8	94.8
AI 700	35.5	71.0	79.4	86.5	93.6	94.2	94.8	94.8	94.8	94.8	94.8	94.8	94.8
AI 600	35.5	71.0	79.4	86.5	93.6	94.2	95.5	95.5	95.5	95.5	95.5	95.5	95.5
AI 500	35.5	71.0	79.4	86.5	94.8	95.5	97.4	97.4	97.4	97.4	97.4	97.4	97.4
AI 400	35.5	71.0	79.4	86.5	94.8	96.1	99.4	99.4	99.4	99.4	99.4	99.4	99.4
AI 300	35.5	71.0	79.4	86.5	95.5	96.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0
AI 200	35.5	71.0	79.4	86.5	95.5	96.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0
AI 100	35.5	71.0	79.4	86.5	95.5	96.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0
AI 0	35.5	71.0	79.4	86.5	95.5	96.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

MAY  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

22  
HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)														
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	≥ 0
NO CEILING	33.6	47.1	49.0	51.0	51.0	51.0	51.6	51.6	51.6	51.6	52.3	52.3	52.3	52.3	52.3
≥ 20000	38.7	52.3	54.2	56.1	56.1	56.1	56.8	56.8	56.8	56.8	57.4	57.4	57.4	57.4	57.4
≥ 18000	38.7	52.3	54.2	56.1	56.1	56.1	56.8	56.8	56.8	56.8	57.4	57.4	57.4	57.4	57.4
≥ 16000	38.7	52.3	54.2	56.1	56.1	56.1	56.8	56.8	56.8	56.8	57.4	57.4	57.4	57.4	57.4
≥ 14000	38.7	52.3	54.2	56.1	56.1	56.1	56.8	56.8	56.8	56.8	57.4	57.4	57.4	57.4	57.4
≥ 12000	39.4	54.2	56.1	58.7	58.7	58.7	59.4	59.4	59.4	59.4	60.0	60.0	60.0	60.0	60.0
≥ 10000	40.0	58.1	60.7	63.2	63.2	63.2	63.9	63.9	63.9	63.9	64.5	64.5	64.5	64.5	64.5
≥ 9000	40.0	58.1	60.7	63.2	63.2	63.2	63.9	63.9	63.9	63.9	64.5	64.5	64.5	64.5	64.5
≥ 8000	42.6	63.2	65.8	68.4	68.4	68.4	69.0	69.0	69.0	69.0	69.7	69.7	69.7	69.7	69.7
≥ 7000	42.6	63.2	66.5	69.0	69.0	69.0	69.7	69.7	69.7	69.7	70.3	70.3	70.3	70.3	70.3
≥ 6000	42.6	63.2	66.5	69.0	69.0	69.0	69.7	69.7	69.7	69.7	70.3	70.3	70.3	70.3	70.3
≥ 5000	42.6	63.2	66.5	69.0	69.0	69.0	69.7	69.7	69.7	69.7	70.3	70.3	70.3	70.3	70.3
≥ 4500	43.2	64.5	68.4	71.6	71.6	71.6	72.3	72.3	72.3	72.3	72.9	72.9	72.9	72.9	72.9
≥ 4000	44.5	67.1	71.6	74.8	74.8	74.8	75.5	75.5	75.5	76.1	76.8	76.8	76.8	76.8	76.8
≥ 3500	44.5	68.4	73.6	76.8	76.8	76.8	77.4	77.4	77.4	78.1	78.7	78.7	78.7	78.7	78.7
≥ 3000	44.5	69.7	76.1	79.4	79.4	79.4	80.7	80.7	80.7	81.9	82.6	82.6	82.6	82.6	82.6
≥ 2500	44.5	70.3	77.4	80.7	80.7	80.7	81.9	81.9	81.9	83.2	83.9	83.9	83.9	83.9	83.9
≥ 2000	45.8	71.6	79.4	83.9	83.9	83.9	85.2	85.2	85.2	87.7	88.4	88.4	88.4	88.4	88.4
≥ 1800	46.5	72.3	80.0	84.5	84.5	84.5	86.5	86.5	86.5	89.0	89.0	89.0	89.0	89.0	89.0
≥ 1500	46.5	72.3	80.0	85.2	85.2	85.2	87.1	87.1	87.1	89.7	89.7	89.7	89.7	89.7	89.7
≥ 1200	46.5	72.3	81.3	86.5	86.5	86.5	88.4	88.4	88.4	91.0	91.0	91.0	91.0	91.0	91.0
≥ 1000	46.5	72.3	81.9	87.1	87.1	87.1	89.0	89.0	89.0	92.3	92.3	92.3	92.3	92.3	92.3
≥ 900	46.5	72.3	81.9	87.1	87.1	87.1	89.0	89.0	89.0	92.3	92.3	92.3	92.3	92.3	92.3
≥ 800	46.5	72.3	81.9	87.1	87.1	87.1	89.0	89.0	89.0	92.3	92.3	92.3	92.3	92.3	92.3
≥ 700	46.5	72.3	81.9	87.1	87.1	87.1	89.0	89.0	89.0	92.3	92.3	92.3	92.3	92.3	92.3
≥ 600	46.5	72.3	81.9	87.1	87.1	87.1	89.0	89.0	89.0	92.3	92.3	92.3	92.3	92.3	92.3
≥ 500	46.5	72.3	82.6	88.4	88.4	88.4	91.6	91.6	91.6	95.5	95.5	95.5	95.5	95.5	95.5
≥ 400	46.5	72.3	82.6	88.4	88.4	88.4	91.6	91.6	91.6	95.5	95.5	95.5	95.5	95.5	95.5
≥ 300	46.5	72.3	82.6	88.4	88.4	88.4	92.3	92.3	92.3	97.4	97.4	97.4	97.4	97.4	97.4
≥ 200	46.5	72.3	82.6	88.4	88.4	88.4	92.3	92.3	92.3	97.4	97.4	97.4	97.4	97.4	97.4
≥ 100	46.5	72.3	82.6	88.4	88.4	88.4	92.3	92.3	92.3	97.4	97.4	97.4	97.4	97.4	97.4
≥ 0	46.5	72.3	82.6	88.4	88.4	88.4	92.3	92.3	92.3	97.4	97.4	97.4	97.4	97.4	97.4

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

MAY

STATION NAME

YEARS

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

ALL

HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	28.8	41.1	44.0	45.1	46.5	46.9	47.2	47.4	47.7	47.7	47.7	47.7	47.7
≥ 20000	32.6	46.8	49.7	51.0	52.7	53.1	53.6	53.8	54.0	54.1	54.1	54.1	54.2
≥ 18000	32.7	47.0	49.9	51.2	53.0	53.3	53.8	54.0	54.3	54.4	54.4	54.4	54.4
≥ 16000	32.7	47.0	49.9	51.3	53.1	53.4	53.9	54.1	54.4	54.4	54.4	54.4	54.5
≥ 14000	32.7	47.3	50.2	51.6	53.4	53.7	54.2	54.4	54.7	54.8	54.8	54.8	54.8
≥ 12000	33.6	48.9	51.9	53.3	55.1	55.4	55.9	56.1	56.4	56.5	56.5	56.5	56.5
≥ 10000	34.8	51.9	55.2	57.0	59.1	59.4	60.0	60.2	60.5	60.6	60.6	60.6	60.7
≥ 9000	34.9	52.3	55.6	57.4	59.5	59.8	60.4	60.7	60.9	61.0	61.0	61.0	61.1
≥ 8000	36.3	55.9	59.3	61.2	63.4	63.7	64.3	64.5	64.9	65.0	65.0	65.0	65.1
≥ 7000	36.5	56.3	59.8	61.7	63.9	64.2	64.8	65.0	65.4	65.5	65.5	65.5	65.6
≥ 6000	36.6	57.3	61.1	63.2	65.4	65.7	66.3	66.5	66.9	67.0	67.0	67.0	67.1
≥ 5000	37.4	59.1	62.9	65.2	67.4	67.8	68.4	68.6	69.1	69.2	69.2	69.2	69.3
≥ 4500	38.3	60.9	64.9	67.3	69.6	70.0	70.6	70.8	71.3	71.4	71.4	71.4	71.5
≥ 4000	39.7	63.8	68.2	70.6	73.0	73.6	74.2	74.4	74.9	75.0	75.0	75.0	75.1
≥ 3500	40.4	65.2	69.9	72.4	74.9	75.5	76.1	76.4	76.9	76.9	76.9	76.9	77.0
≥ 3000	41.5	67.6	72.9	76.0	78.9	79.5	80.2	80.7	81.2	81.3	81.3	81.3	81.4
≥ 2500	41.9	68.6	74.0	77.2	80.2	80.9	81.7	82.2	82.7	82.7	82.7	82.7	82.8
≥ 2000	42.3	70.2	76.4	79.9	83.2	83.9	85.0	85.6	86.1	86.1	86.1	86.1	86.2
≥ 1800	42.3	70.3	76.7	80.2	83.6	84.3	85.4	86.0	86.5	86.5	86.5	86.5	86.6
≥ 1500	42.3	71.1	77.7	81.4	84.8	85.7	86.9	87.5	88.0	88.1	88.1	88.1	88.2
≥ 1200	42.4	71.2	78.2	82.2	85.8	86.6	88.1	88.7	89.2	89.3	89.3	89.3	89.4
≥ 1000	42.5	71.8	79.2	83.5	87.5	88.4	89.9	90.7	91.1	91.2	91.2	91.2	91.3
≥ 900	42.5	71.8	79.4	83.6	87.7	88.6	90.1	90.8	91.3	91.4	91.4	91.4	91.5
≥ 800	42.5	71.8	79.6	84.1	88.6	89.7	91.3	92.0	92.6	92.7	92.7	92.7	92.7
≥ 700	42.5	71.8	79.6	84.2	88.8	89.8	91.5	92.3	92.8	92.9	92.9	92.9	93.0
≥ 600	42.6	71.9	79.8	84.4	89.0	90.1	91.9	92.7	93.4	93.5	93.5	93.5	93.6
≥ 500	42.6	71.9	80.0	84.8	90.0	91.4	93.8	94.7	95.4	95.5	95.5	95.5	95.8
≥ 400	42.6	71.9	80.0	84.8	90.2	91.7	94.6	95.7	96.5	96.5	96.5	96.5	96.9
≥ 300	42.6	71.9	80.0	84.8	90.6	92.3	95.5	96.8	97.7	97.9	98.1	98.1	98.2
≥ 200	42.6	71.9	80.0	84.8	90.6	92.3	95.5	96.9	98.0	98.2	98.6	98.6	98.9
≥ 100	42.6	71.9	80.0	84.8	90.6	92.3	95.5	97.0	98.2	98.7	99.0	99.0	99.5
0	42.6	71.9	80.0	84.8	90.6	92.3	95.5	97.0	98.2	98.7	99.1	99.2	100.0

TOTAL NUMBER OF OBSERVATIONS

1240

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

## CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

JUN

STATION

STATION NAME

YEARS

MONTH

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

01

HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)														
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	≥ 0
NO CEILING	23.3	38.7	41.3	44.0	46.7	47.3	48.0	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
≥ 20000	23.3	40.7	43.3	46.0	49.3	50.0	51.3	52.0	52.0	52.7	52.7	52.7	52.7	52.7	52.7
≥ 18000	23.3	40.7	43.3	46.0	49.3	50.0	51.3	52.0	52.0	52.7	52.7	52.7	52.7	52.7	52.7
≥ 16000	23.3	40.7	43.3	46.0	49.3	50.0	51.3	52.0	52.0	52.7	52.7	52.7	52.7	52.7	52.7
≥ 14000	24.0	41.3	44.0	46.7	50.0	50.7	52.0	52.7	52.7	53.3	53.3	53.3	53.3	53.3	53.3
≥ 12000	24.0	41.3	44.0	46.7	50.0	50.7	52.0	52.7	52.7	53.3	53.3	53.3	53.3	53.3	53.3
≥ 10000	25.3	43.3	46.0	48.7	52.0	53.3	55.3	56.0	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 9000	25.3	43.3	46.0	48.7	52.0	53.3	55.3	56.0	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 8000	27.3	48.0	50.7	53.3	56.7	58.7	60.7	61.3	62.0	62.0	62.0	62.0	62.0	62.0	62.0
≥ 7000	28.0	48.7	52.0	54.7	58.0	60.0	62.0	62.7	63.3	63.3	63.3	63.3	63.3	63.3	63.3
≥ 6000	28.0	49.3	52.7	55.3	58.7	60.7	62.7	63.3	63.3	64.7	64.7	64.7	64.7	64.7	64.7
≥ 5000	28.7	50.7	54.0	56.7	60.7	62.7	64.7	65.3	65.3	66.7	66.7	66.7	66.7	66.7	66.7
≥ 4500	30.0	52.7	56.0	59.3	63.3	65.3	67.3	68.7	68.7	70.0	70.0	70.0	70.0	70.0	70.0
≥ 4000	30.0	53.3	57.3	60.7	65.3	67.3	69.3	70.7	70.7	72.0	72.0	72.0	72.0	72.0	72.0
≥ 3500	30.0	54.0	58.0	61.3	66.0	68.0	70.0	71.3	71.3	72.7	72.7	72.7	72.7	72.7	72.7
≥ 3000	31.3	56.7	61.3	65.3	70.0	72.0	74.0	75.3	75.3	76.7	76.7	76.7	76.7	76.7	76.7
≥ 2500	31.3	56.7	62.0	66.0	70.7	72.7	74.7	76.0	76.0	77.3	77.3	77.3	77.3	77.3	77.3
≥ 2000	31.3	58.7	64.0	68.0	74.7	76.7	79.3	81.3	81.3	82.7	82.7	82.7	82.7	82.7	82.7
≥ 1800	31.3	58.7	64.0	68.7	75.3	77.3	80.0	82.0	82.0	83.3	83.3	83.3	83.3	83.3	83.3
≥ 1500	32.0	60.7	66.0	70.7	78.0	80.0	82.7	84.7	84.7	86.0	86.0	86.0	86.0	86.0	86.0
≥ 1200	34.0	62.7	68.7	73.3	80.7	82.7	86.0	88.0	88.0	89.3	89.3	89.3	89.3	89.3	89.3
≥ 1000	34.0	62.7	68.7	74.0	81.3	83.3	87.3	89.3	89.3	90.7	90.7	90.7	91.3	91.3	91.3
≥ 900	34.0	62.7	68.7	74.0	81.3	83.3	87.3	89.3	89.3	90.7	90.7	90.7	91.3	91.3	91.3
≥ 800	34.0	62.7	68.7	74.0	81.3	83.3	87.3	89.3	89.3	90.7	91.3	91.3	92.0	92.0	92.0
≥ 700	34.0	62.7	68.7	74.0	81.3	84.0	88.0	90.0	90.0	91.3	92.0	92.0	92.7	92.7	92.7
≥ 600	34.0	63.3	69.3	74.7	82.0	84.7	88.7	90.7	90.7	92.0	92.7	93.3	93.3	93.3	93.3
≥ 500	34.0	63.3	69.3	75.3	82.7	85.3	89.3	91.3	91.3	93.3	94.0	94.7	94.7	94.7	94.7
≥ 400	34.0	63.3	70.0	76.0	83.3	86.0	90.7	92.7	92.7	94.7	95.3	96.0	96.0	96.0	96.0
≥ 300	34.0	63.3	70.0	76.0	84.0	86.7	91.3	94.0	94.0	96.0	96.7	97.3	97.3	97.3	97.3
≥ 200	34.0	63.3	70.0	76.0	84.0	86.7	91.3	94.0	94.0	96.0	96.7	97.3	97.3	97.3	97.3
≥ 100	34.0	63.3	70.0	76.0	84.0	86.7	91.3	94.0	94.0	96.0	96.7	97.3	97.3	97.3	97.3
≥ 0	34.0	63.3	70.0	76.0	84.0	86.7	91.3	94.0	94.0	96.0	96.7	97.3	97.3	97.3	97.3

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

JUN

STATION NAME

YEARS

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

04  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	16.7	26.0	33.3	36.7	40.7	43.3	46.0	47.3	47.3	48.7	49.3	49.3	50.0	50.0
≥ 20000	16.7	26.0	33.3	37.3	41.3	44.0	47.3	48.7	48.7	50.7	51.3	51.3	52.0	52.0
≥ 18000	16.7	26.0	33.3	37.3	41.3	44.0	47.3	48.7	48.7	50.7	51.3	51.3	52.0	52.0
≥ 16000	16.7	26.0	33.3	37.3	41.3	44.0	47.3	48.7	48.7	50.7	51.3	51.3	52.0	52.0
≥ 14000	16.7	26.0	33.3	37.3	41.3	44.0	47.3	48.7	48.7	50.7	51.3	51.3	52.0	52.0
≥ 12000	16.7	26.0	33.3	38.0	42.0	44.7	48.0	49.3	49.3	51.3	52.0	52.0	52.7	52.7
≥ 10000	19.3	28.7	36.0	40.7	44.7	47.3	50.7	52.0	52.0	54.0	55.3	55.3	56.0	56.0
≥ 9000	19.3	28.7	36.0	40.7	44.7	47.3	50.7	52.0	52.0	54.0	55.3	55.3	56.0	56.0
≥ 8000	21.3	32.0	39.3	44.0	48.0	50.7	54.0	55.3	55.3	58.0	59.3	59.3	60.0	60.0
≥ 7000	21.3	32.0	39.3	44.0	48.0	50.7	54.0	55.3	55.3	58.0	59.3	59.3	60.0	60.0
≥ 6000	22.0	32.7	40.0	44.7	48.7	51.3	54.7	56.0	56.0	58.7	60.0	60.0	60.7	60.7
≥ 5000	22.0	34.0	41.3	46.0	50.7	53.3	56.7	58.0	58.0	60.7	62.0	62.0	62.7	62.7
≥ 4500	22.7	34.7	42.7	47.3	52.0	54.7	58.0	59.3	59.3	62.0	63.3	63.3	64.0	64.0
≥ 4000	24.0	36.7	45.3	50.7	55.3	58.7	62.0	64.0	64.0	67.3	68.7	68.7	69.3	69.3
≥ 3500	24.0	37.3	46.0	51.3	56.0	59.3	62.7	64.7	64.7	68.0	69.3	69.3	70.0	70.0
≥ 3000	25.3	40.0	49.3	56.0	60.7	64.0	67.3	69.3	69.3	72.7	74.7	74.7	75.3	75.3
≥ 2500	25.3	40.0	49.3	56.0	60.7	64.0	67.3	69.3	69.3	72.7	74.7	74.7	75.3	75.3
≥ 2000	25.3	40.7	50.7	58.0	63.3	66.7	70.0	72.0	72.0	75.3	77.3	77.3	78.0	78.0
≥ 1800	25.3	40.7	50.7	58.0	63.3	66.7	70.0	72.0	72.0	75.3	77.3	77.3	78.0	78.0
≥ 1500	26.0	42.0	52.0	59.3	65.3	68.7	72.0	74.7	74.7	78.0	80.0	80.0	80.7	80.7
≥ 1200	26.0	42.7	52.7	60.0	66.0	69.3	72.7	75.3	75.3	78.7	80.7	80.7	81.3	81.3
≥ 1000	26.0	42.7	52.7	60.0	66.0	69.3	73.3	76.7	76.7	80.0	82.7	82.7	83.3	83.3
≥ 900	26.0	42.7	52.7	60.0	66.0	69.3	73.3	76.7	76.7	80.0	82.7	82.7	83.3	83.3
≥ 800	26.0	42.7	52.7	60.0	66.7	70.0	74.7	78.0	78.0	81.3	84.0	84.0	84.7	84.7
≥ 700	26.0	43.3	54.0	61.3	68.0	71.3	76.0	79.3	79.3	82.7	85.3	85.3	86.0	86.0
≥ 600	26.0	43.3	54.0	61.3	68.0	71.3	76.0	79.3	79.3	82.7	85.3	85.3	86.7	86.7
≥ 500	26.0	43.3	54.0	61.3	69.3	72.7	78.0	81.3	81.3	85.3	88.0	88.0	88.7	88.7
≥ 400	26.0	43.3	54.0	61.3	70.7	74.0	79.3	84.0	84.0	88.7	91.3	91.3	92.0	92.0
≥ 300	26.0	43.3	54.0	61.3	71.3	74.7	80.0	84.7	84.7	90.0	93.3	93.3	94.0	94.0
≥ 200	26.0	43.3	54.0	61.3	71.3	74.7	80.0	85.3	85.3	90.7	95.3	95.3	96.0	96.0
≥ 100	26.0	43.3	54.0	61.3	71.3	74.7	80.0	85.3	85.3	90.7	95.3	95.3	96.7	96.7
≥ 0	26.0	43.3	54.0	61.3	71.3	74.7	80.0	85.3	85.3	90.7	95.3	95.3	97.3	97.3

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

## CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

JUN

STATION

STATION NAME

YEARS

MOUTH

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)07  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ ⅓	≥ 0
NO CEILING	14.7	30.7	36.0	38.7	41.3	42.7	43.3	43.3	43.3	43.3	44.0	44.0	44.0	44.0
≥ 20000	15.3	33.3	39.3	42.0	45.3	47.3	48.0	48.0	48.0	48.0	48.7	48.7	48.7	48.7
≥ 18000	15.3	33.3	39.3	42.0	45.3	47.3	48.0	48.0	48.0	48.0	48.7	48.7	48.7	48.7
≥ 16000	15.3	33.3	39.3	42.0	45.3	47.3	48.0	48.0	48.0	48.0	48.7	48.7	48.7	48.7
≥ 14000	15.3	34.0	40.0	42.7	46.0	48.0	48.7	48.7	48.7	49.3	49.3	49.3	49.3	49.3
≥ 12000	15.3	35.3	41.3	44.0	47.3	49.3	50.0	50.0	50.0	50.7	50.7	50.7	50.7	50.7
≥ 10000	16.7	37.3	43.3	46.7	50.7	53.3	54.0	54.0	54.0	55.3	55.3	55.3	55.3	55.3
≥ 9000	16.7	37.3	43.3	46.7	50.7	53.3	54.0	54.0	54.0	55.3	55.3	55.3	55.3	55.3
≥ 8000	18.0	41.3	47.3	51.3	56.0	59.3	60.7	60.7	60.7	62.0	62.0	62.0	62.0	62.0
≥ 7000	18.0	42.0	48.0	52.7	57.3	60.7	62.0	62.0	62.0	63.3	63.3	63.3	63.3	63.3
≥ 6000	18.0	42.7	48.7	53.3	58.0	61.3	63.3	63.3	63.3	64.7	64.7	64.7	64.7	64.7
≥ 5000	18.0	43.3	49.3	54.0	58.7	62.0	64.0	64.0	64.0	65.3	65.3	65.3	65.3	65.3
≥ 4500	18.7	44.7	50.7	55.3	60.0	63.3	65.3	65.3	65.3	66.7	66.7	66.7	66.7	66.7
≥ 4000	18.7	45.3	51.3	56.7	61.3	64.7	66.7	66.7	66.7	68.0	68.0	68.0	68.0	68.0
≥ 3500	18.7	45.3	51.3	56.7	61.3	64.7	67.3	67.3	67.3	68.7	68.7	68.7	68.7	68.7
≥ 3000	18.7	45.3	51.3	56.7	62.0	65.3	68.0	68.0	68.0	69.3	71.3	71.3	71.3	71.3
≥ 2500	18.7	45.3	51.3	56.7	62.0	65.3	68.0	68.0	68.0	70.0	72.0	72.0	72.0	72.0
≥ 2000	18.7	45.3	51.3	57.3	64.0	67.3	70.7	71.3	71.3	73.3	75.3	75.3	75.3	75.3
≥ 1800	19.3	46.0	52.0	58.0	64.7	68.0	71.3	72.0	72.0	74.0	76.0	76.0	76.0	76.0
≥ 1500	19.3	46.7	52.7	60.0	66.7	70.0	74.0	74.7	74.7	76.7	78.7	78.7	78.7	78.7
≥ 1200	19.3	46.7	53.3	60.7	67.3	70.7	74.7	75.3	75.3	77.3	79.3	79.3	79.3	79.3
≥ 1000	19.3	46.7	54.0	62.0	70.0	73.3	77.3	78.7	78.7	80.7	82.7	82.7	82.7	82.7
≥ 900	19.3	46.7	54.7	62.7	71.3	75.3	79.3	80.7	80.7	82.7	84.7	84.7	84.7	84.7
≥ 800	19.3	46.7	54.7	62.7	71.3	76.7	81.3	83.3	83.3	86.7	88.7	88.7	88.7	88.7
≥ 700	19.3	47.3	55.3	64.0	72.7	78.7	84.0	86.0	86.0	89.3	91.3	91.3	91.3	91.3
≥ 600	19.3	47.3	56.0	65.3	74.0	80.0	85.3	87.3	87.3	90.7	92.7	92.7	92.7	92.7
≥ 500	19.3	47.3	56.0	65.3	74.7	80.7	86.0	88.0	88.0	91.3	93.3	93.3	93.3	93.3
≥ 400	19.3	47.3	56.0	65.3	74.7	80.7	87.3	89.3	89.3	92.7	95.3	95.3	95.3	95.3
≥ 300	19.3	47.3	56.0	65.3	74.7	80.7	87.3	89.3	89.3	92.7	96.0	96.0	96.0	96.0
≥ 200	19.3	47.3	56.0	65.3	74.7	80.7	87.3	89.3	89.3	92.7	96.7	96.7	96.7	96.7
≥ 100	19.3	47.3	56.0	65.3	74.7	80.7	87.3	89.3	89.3	92.7	96.7	96.7	96.7	96.7
≥ 0	19.3	47.3	56.0	65.3	74.7	80.7	87.3	89.3	89.3	92.7	96.7	96.7	96.7	96.7

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEAR

JUN  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

10  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	18.0	34.7	41.3	42.7	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
≥ 20000	18.0	36.7	43.3	45.3	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7
≥ 18000	18.0	36.7	43.3	45.3	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7
≥ 16000	18.0	36.7	43.3	45.3	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7
≥ 14000	18.0	37.3	44.0	46.0	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3
≥ 12000	18.7	38.0	44.7	46.7	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0
≥ 10000	19.3	40.7	47.3	49.3	50.7	50.7	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3
≥ 9000	19.3	40.7	47.3	49.3	50.7	50.7	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3
≥ 8000	20.0	44.0	51.3	53.3	54.7	54.7	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
≥ 7000	20.0	44.0	51.3	54.0	55.3	55.3	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 6000	20.0	44.7	52.0	54.7	56.0	56.7	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3
≥ 5000	20.7	46.0	54.0	56.7	58.0	58.7	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3
≥ 4500	20.7	46.0	54.7	57.3	58.7	59.3	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 4000	20.7	46.0	55.3	58.0	60.0	60.7	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0
≥ 3500	21.3	46.7	56.0	58.7	61.3	62.0	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3
≥ 3000	23.3	51.3	62.0	65.3	68.0	70.0	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3
≥ 2500	24.0	52.7	64.0	67.3	70.0	72.0	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3
≥ 2000	24.7	56.0	68.7	73.3	76.7	78.7	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
≥ 1800	24.7	56.0	68.7	73.3	76.7	78.7	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
≥ 1500	25.3	58.7	72.7	78.7	82.0	84.0	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3
≥ 1200	25.3	58.7	72.7	78.7	83.3	85.3	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7
≥ 1000	25.3	59.3	73.3	79.3	84.7	87.3	89.3	90.0	90.0	90.7	90.7	90.7	90.7	90.7
≥ 900	25.3	59.3	73.3	79.3	84.7	87.3	89.3	90.0	90.0	90.7	90.7	90.7	90.7	90.7
≥ 800	25.3	60.0	74.0	80.7	86.0	89.3	91.3	92.0	92.0	93.3	93.3	93.3	93.3	93.3
≥ 700	25.3	60.0	74.0	81.3	87.3	90.7	93.3	94.0	94.0	95.3	95.3	95.3	95.3	95.3
≥ 600	25.3	60.7	74.7	82.0	88.0	92.0	94.7	95.3	95.3	96.7	96.7	96.7	96.7	96.7
≥ 500	25.3	60.7	74.7	82.0	88.7	92.7	96.7	97.3	97.3	99.3	99.3	99.3	99.3	99.3
≥ 400	25.3	60.7	74.7	82.0	88.7	92.7	96.7	98.0	98.0	100.0	100.0	100.0	100.0	100.0
≥ 300	25.3	60.7	74.7	82.0	88.7	92.7	96.7	98.0	98.0	100.0	100.0	100.0	100.0	100.0
≥ 200	25.3	60.7	74.7	82.0	88.7	92.7	96.7	98.0	98.0	100.0	100.0	100.0	100.0	100.0
≥ 100	25.3	60.7	74.7	82.0	88.7	92.7	96.7	98.0	98.0	100.0	100.0	100.0	100.0	100.0
≥ 0	25.3	60.7	74.7	82.0	88.7	92.7	96.7	98.0	98.0	100.0	100.0	100.0	100.0	100.0

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUN

MOUTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

13

HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	≥ 0
NO CEILING	16.0	28.7	33.3	34.0	34.7	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3
≥ 20000	16.0	33.3	40.0	40.7	42.7	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
≥ 18000	16.0	33.3	40.0	40.7	42.7	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
≥ 16000	16.0	33.3	40.0	40.7	42.7	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
≥ 14000	16.0	33.3	40.0	40.7	42.7	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
≥ 12000	17.3	36.0	42.7	43.3	45.3	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0
≥ 10000	19.3	39.3	46.7	47.3	49.3	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
≥ 9000	19.3	39.3	46.7	47.3	49.3	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
≥ 8000	20.0	40.7	48.0	48.7	50.7	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3
≥ 7000	20.0	41.3	48.7	50.0	52.0	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7
≥ 6000	20.0	42.7	50.0	51.3	53.3	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
≥ 5000	20.7	43.3	50.7	52.0	54.7	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 4500	20.7	44.0	51.3	52.7	55.3	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 4000	20.7	44.7	52.7	54.7	58.7	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 3500	21.3	46.7	55.3	57.3	62.0	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3
≥ 3000	22.7	56.0	64.7	66.7	72.7	74.0	74.0	74.7	74.7	74.7	74.7	74.7	74.7	74.7
≥ 2500	23.3	59.3	68.0	70.0	76.0	77.3	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7
≥ 2000	24.7	64.0	72.7	75.3	82.0	83.3	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7
≥ 1800	24.7	64.0	72.7	75.3	82.0	83.3	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7
≥ 1500	24.7	67.3	76.7	79.3	86.0	87.3	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
≥ 1200	24.7	67.3	76.7	80.0	86.7	88.0	89.3	89.3	89.3	89.3	89.3	89.3	89.3	89.3
≥ 1000	25.3	68.7	78.0	84.0	90.7	92.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 900	25.3	68.7	78.0	84.0	92.0	93.3	97.3	97.3	97.3	97.3	97.3	97.3	97.3	97.3
≥ 800	25.3	68.7	78.0	84.0	92.0	93.3	97.3	97.3	97.3	97.3	97.3	97.3	97.3	97.3
≥ 700	25.3	68.7	78.0	84.0	93.3	94.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7
≥ 600	25.3	68.7	78.0	84.0	93.3	94.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7
≥ 500	25.3	68.7	78.0	84.0	93.3	94.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7
≥ 400	25.3	68.7	78.0	84.0	93.3	94.7	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3
≥ 300	25.3	68.7	78.0	84.0	93.3	94.7	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3
≥ 200	25.3	68.7	78.0	84.0	93.3	94.7	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3
≥ 100	25.3	68.7	78.0	84.0	93.3	94.7	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3
0	25.3	68.7	78.0	84.0	93.3	94.7	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUN

MONTH

16

HOURS (L.S.T.)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	15.3	30.7	36.0	37.3	38.0	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7
≥ 20000	17.3	36.0	42.7	44.7	46.7	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3
≥ 18000	17.3	36.0	42.7	44.7	46.7	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3
≥ 16000	17.3	36.0	42.7	44.7	46.7	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3
≥ 14000	17.3	36.0	42.7	44.7	46.7	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3
≥ 12000	17.3	36.7	44.0	46.0	48.0	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
≥ 10000	18.7	42.0	50.0	52.7	54.7	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
≥ 9000	18.7	42.0	50.0	52.7	54.7	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
≥ 8000	18.7	44.7	53.3	56.0	58.7	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3
≥ 7000	18.7	45.3	54.0	56.7	59.3	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 6000	18.7	46.0	54.7	57.3	60.0	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7
≥ 5000	20.0	48.7	57.3	60.0	62.7	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3
≥ 4500	20.7	48.7	57.3	60.0	62.7	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3
≥ 4000	20.7	51.3	60.0	62.7	65.3	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0
≥ 3500	21.3	53.3	62.0	65.3	68.0	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3
≥ 3000	22.0	62.7	72.7	78.0	82.7	84.0	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7
≥ 2500	23.3	65.3	75.3	80.7	85.3	86.7	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
≥ 2000	23.3	68.0	80.0	85.3	90.0	91.3	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0
≥ 1800	23.3	68.0	80.0	85.3	90.0	91.3	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0
≥ 1500	23.3	68.0	80.0	87.3	92.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0
≥ 1200	23.3	68.0	81.3	88.7	93.3	94.7	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3
≥ 1000	23.3	68.7	82.0	89.3	94.0	95.3	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 900	23.3	68.7	82.0	89.3	94.0	95.3	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0
≥ 800	23.3	68.7	82.0	90.0	94.7	96.0	97.3	98.0	98.0	98.0	98.0	98.0	98.0	98.0
≥ 700	23.3	68.7	82.0	90.7	95.3	96.7	98.0	98.7	98.7	98.7	98.7	98.7	98.7	98.7
≥ 600	23.3	68.7	82.0	90.7	95.3	96.7	98.0	98.7	98.7	98.7	98.7	98.7	98.7	98.7
≥ 500	23.3	68.7	82.0	90.7	95.3	96.7	98.0	98.7	98.7	98.7	98.7	98.7	98.7	98.7
≥ 400	23.3	68.7	82.0	90.7	95.3	96.7	98.0	98.7	98.7	98.7	98.7	98.7	98.7	98.7
≥ 300	23.3	68.7	82.0	90.7	95.3	96.7	98.0	98.7	98.7	98.7	98.7	98.7	98.7	98.7
≥ 200	23.3	68.7	82.0	90.7	95.3	96.7	98.0	98.7	98.7	98.7	98.7	98.7	98.7	98.7
≥ 100	23.3	68.7	82.0	90.7	95.3	96.7	98.0	98.7	98.7	98.7	98.7	98.7	98.7	98.7
≥ 0	23.3	68.7	82.0	90.7	95.3	96.7	98.0	98.7	98.7	98.7	98.7	98.7	98.7	98.7

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

JUN  
MONTH

19

HOURS (L.S.T.)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾
NO CEILING	14.7	36.0	41.3	42.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7
≥ 20000	16.7	43.3	49.3	51.3	54.0	54.0	54.0	54.0	54.0	54.0	54.0
≥ 18000	16.7	43.3	49.3	51.3	54.0	54.0	54.0	54.0	54.0	54.0	54.0
≥ 16000	16.7	43.3	49.3	51.3	54.0	54.0	54.0	54.0	54.0	54.0	54.0
≥ 14000	17.3	44.0	50.0	52.0	54.7	54.7	54.7	54.7	54.7	54.7	54.7
≥ 12000	17.3	44.0	50.0	53.3	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 10000	19.3	48.0	54.0	58.7	62.0	62.0	62.0	62.0	62.0	62.0	62.0
≥ 9000	19.3	48.7	54.7	59.3	62.7	62.7	62.7	62.7	62.7	62.7	62.7
≥ 8000	19.3	50.7	58.0	64.0	68.0	68.7	69.3	69.3	69.3	69.3	69.3
≥ 7000	20.0	52.0	59.3	65.3	69.3	70.0	70.7	70.7	70.7	70.7	70.7
≥ 6000	20.0	52.7	60.0	66.7	70.7	71.3	72.0	72.0	72.0	72.0	72.0
≥ 5000	20.0	53.3	60.7	67.3	71.3	72.0	72.7	72.7	72.7	72.7	72.7
≥ 4500	21.3	54.7	62.7	70.0	74.0	74.7	75.3	75.3	75.3	75.3	75.3
≥ 4000	21.3	56.0	64.0	71.3	75.3	76.0	76.7	76.7	76.7	76.7	76.7
≥ 3500	21.3	56.7	64.7	72.0	76.0	76.7	77.3	77.3	77.3	77.3	77.3
≥ 3000	22.0	60.0	68.0	77.3	81.3	82.0	82.7	82.7	82.7	82.7	82.7
≥ 2500	22.0	60.7	69.3	78.7	82.7	84.7	85.3	85.3	85.3	85.3	85.3
≥ 2000	22.0	62.7	71.3	80.7	85.3	87.3	88.0	88.0	88.0	88.0	88.0
≥ 1800	22.0	62.7	71.3	80.7	85.3	87.3	88.0	88.0	88.0	88.0	88.0
≥ 1500	22.0	64.0	72.7	82.0	88.0	90.0	90.7	90.7	90.7	90.7	90.7
≥ 1200	22.0	64.0	72.7	82.7	89.3	91.3	92.0	92.0	92.0	92.0	92.0
≥ 1000	22.7	64.7	74.0	84.0	91.3	94.0	95.3	95.3	95.3	95.3	95.3
≥ 900	22.7	64.7	74.0	84.0	91.3	94.0	95.3	95.3	95.3	95.3	95.3
≥ 800	22.7	64.7	74.0	84.0	92.0	94.7	96.0	96.0	96.0	96.0	96.0
≥ 700	22.7	64.7	74.0	84.0	92.0	94.7	96.0	96.0	96.0	96.0	96.0
≥ 600	22.7	64.7	74.0	84.0	92.7	96.0	97.3	97.3	97.3	97.3	97.3
≥ 500	22.7	64.7	74.0	84.0	92.7	96.0	97.3	97.3	97.3	97.3	97.3
≥ 400	22.7	64.7	74.0	84.7	93.3	96.7	98.7	98.7	98.7	98.7	98.7
≥ 300	22.7	64.7	74.0	84.7	94.0	97.3	98.7	98.7	98.7	98.7	98.7
≥ 200	22.7	64.7	74.0	84.7	94.0	97.3	98.7	98.7	98.7	98.7	98.7
≥ 100	22.7	64.7	74.0	84.7	94.0	97.3	98.7	98.7	98.7	98.7	98.7
≥ 0	22.7	64.7	74.0	84.7	94.0	97.3	98.7	98.7	98.7	98.7	98.7

TOTAL NUMBER OF OBSERVATIONS

150

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

## CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

JUN

STATION

STATION NAME

YEARS

MONTH

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

22

HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	26.0	39.3	42.7	43.3	46.0	46.7	47.3	47.3	47.3	47.3	47.3	47.3	47.3	47.3
≥ 20000	28.7	42.7	46.7	48.7	51.3	52.7	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3
AI 18000	28.7	42.7	46.7	48.7	51.3	52.7	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3
AI 16000	28.7	42.7	46.7	48.7	51.3	52.7	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3
AI 14000	29.3	44.0	48.0	50.0	52.7	54.0	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7
AI 12000	30.0	45.3	49.3	51.3	54.0	55.3	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 10000	33.3	50.7	54.7	56.7	60.0	61.3	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7
AI 9000	33.3	50.7	54.7	56.7	60.0	61.3	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7
AI 8000	36.0	55.3	59.3	62.0	65.3	66.7	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
AI 7000	36.0	55.3	59.3	62.0	65.3	66.7	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
AI 6000	36.7	56.0	60.0	62.7	66.0	67.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3
AI 5000	38.0	58.0	62.0	64.7	68.0	69.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3
AI 4500	38.7	59.3	63.3	66.0	69.3	72.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0
AI 4000	38.7	62.7	66.7	69.3	73.3	76.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
AI 3500	38.7	62.7	66.7	69.3	73.3	76.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
AI 3000	38.7	64.7	68.7	72.0	76.0	79.3	82.0	82.7	82.7	82.7	82.7	82.7	82.7	82.7
AI 2500	40.0	66.0	70.7	74.0	78.0	82.0	84.7	85.3	85.3	85.3	85.3	85.3	85.3	85.3
AI 2000	40.0	66.7	71.3	75.3	80.0	84.0	86.7	87.3	87.3	87.3	87.3	87.3	87.3	87.3
AI 1800	40.0	66.7	71.3	75.3	80.0	84.0	86.7	87.3	87.3	87.3	87.3	87.3	87.3	87.3
AI 1500	40.0	66.7	72.7	77.3	82.0	86.0	89.3	90.0	90.0	90.0	90.0	90.0	90.0	90.0
AI 1200	40.0	66.7	72.7	78.0	82.7	86.7	90.0	90.7	90.7	90.7	90.7	90.7	90.7	90.7
AI 1000	40.0	68.0	74.0	80.0	85.3	89.3	92.7	93.3	93.3	94.0	94.0	94.0	94.0	94.0
AI 900	40.0	68.0	74.0	80.0	86.0	90.0	93.3	94.0	94.0	94.7	94.7	94.7	94.7	94.7
AI 800	40.0	68.0	74.0	80.0	86.0	90.0	93.3	94.0	94.0	94.7	95.3	95.3	95.3	95.3
AI 700	40.0	68.0	74.7	80.7	86.7	90.7	94.0	94.7	94.7	95.3	95.0	95.0	95.0	95.0
AI 600	40.0	68.0	74.7	81.3	87.3	91.3	94.7	95.3	95.3	96.0	96.7	96.7	96.7	96.7
AI 500	40.0	68.0	75.3	82.0	88.0	92.0	95.3	96.0	96.0	96.7	97.3	97.3	97.3	97.3
AI 400	40.0	68.0	75.3	82.0	88.0	92.0	95.3	96.0	96.0	96.7	97.3	97.3	97.3	97.3
AI 300	40.0	68.0	75.3	82.0	88.0	92.7	96.0	96.7	96.7	97.3	98.0	98.0	98.0	98.0
AI 200	40.0	68.0	75.3	82.0	88.0	92.7	96.0	96.7	96.7	97.3	98.0	98.0	98.0	98.0
AI 100	40.0	68.0	75.3	82.0	88.0	92.7	96.0	96.7	96.7	97.3	98.0	98.0	98.0	98.0
AI 0	40.0	68.0	75.3	82.0	88.0	92.7	96.0	96.7	96.7	97.3	98.0	98.0	98.0	98.0

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

JUN

STATION NAME

YEARS

MONTH

ALL

HOURS (LST)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	18.1	33.1	38.2	39.9	41.9	42.8	43.3	43.6	43.6	43.8	43.9	43.9	44.0
≥ 20000	19.0	36.5	42.3	44.5	47.2	48.2	48.9	49.2	49.2	49.5	49.7	49.7	49.8
≥ 18000	19.0	36.5	42.3	44.5	47.2	48.2	48.9	49.2	49.2	49.5	49.7	49.7	49.8
≥ 16000	19.0	36.5	42.3	44.5	47.2	48.2	48.9	49.2	49.2	49.5	49.7	49.7	49.8
≥ 14000	19.3	37.0	42.8	45.0	47.7	48.7	49.4	49.7	49.7	50.0	50.2	50.3	50.3
≥ 12000	19.6	37.8	43.7	46.2	48.9	49.9	50.7	50.9	50.9	51.3	51.4	51.5	51.5
≥ 10000	21.4	41.3	47.3	50.1	53.0	54.2	55.2	55.4	55.4	55.8	56.1	56.2	56.2
≥ 9000	21.4	41.3	47.3	50.2	53.1	54.3	55.3	55.5	55.5	55.8	56.2	56.3	56.3
≥ 8000	22.6	44.6	50.9	54.1	57.3	58.7	59.8	60.1	60.1	60.5	60.8	60.9	60.9
≥ 7000	22.8	45.1	51.5	54.9	58.1	59.5	60.7	60.9	60.9	61.3	61.7	61.8	61.8
≥ 6000	22.9	45.8	52.3	55.8	58.9	60.4	61.8	62.0	62.0	62.3	62.8	62.9	62.9
≥ 5000	23.5	47.2	53.7	57.2	60.6	62.2	63.5	63.8	63.8	64.3	64.6	64.7	64.7
≥ 4500	24.1	48.1	54.8	58.5	61.9	63.7	65.0	65.3	65.3	65.8	66.2	66.3	66.3
≥ 4000	24.3	49.5	56.6	60.5	64.3	66.2	67.6	68.0	68.0	68.6	68.9	69.0	69.0
≥ 3500	24.6	50.3	57.5	61.5	65.5	67.4	68.9	69.3	69.3	69.9	70.3	70.3	70.3
≥ 3000	25.5	54.6	62.3	67.2	71.7	73.8	75.6	76.1	76.1	76.8	77.3	77.4	77.4
≥ 2500	26.0	55.8	63.8	68.7	73.2	75.6	77.4	77.9	77.9	78.8	79.3	79.3	79.3
≥ 2000	26.3	57.8	66.3	71.7	77.0	79.4	81.4	82.1	82.1	82.9	83.4	83.5	83.5
≥ 1800	26.3	57.8	66.3	71.8	77.2	79.6	81.6	82.3	82.3	83.1	83.6	83.7	83.7
≥ 1500	26.6	59.3	68.2	74.3	80.0	82.4	84.6	85.3	85.3	86.2	86.7	86.8	86.8
≥ 1200	26.8	59.6	68.8	75.3	81.2	83.6	85.8	86.6	86.6	87.4	87.9	88.0	88.0
≥ 1000	27.0	60.2	69.6	76.6	82.9	85.5	88.4	89.4	89.4	90.4	91.0	91.2	91.2
≥ 900	27.0	60.2	69.7	76.7	83.3	86.0	88.9	89.9	89.9	90.9	91.5	91.7	91.7
≥ 800	27.0	60.3	69.8	76.9	83.8	86.7	89.8	91.0	91.0	92.3	93.0	93.2	93.2
≥ 700	27.0	60.4	70.1	77.5	84.6	87.7	91.0	92.2	92.2	93.4	94.2	94.3	94.3
≥ 600	27.0	60.6	70.3	77.9	85.1	88.3	91.8	92.9	92.9	94.3	95.0	95.2	95.2
≥ 500	27.0	60.6	70.4	78.2	85.7	88.9	92.6	93.8	93.8	95.5	96.3	96.5	96.5
≥ 400	27.0	60.6	70.5	78.3	86.0	89.3	93.3	94.8	94.8	96.5	97.3	97.6	97.6
≥ 300	27.0	60.6	70.5	78.3	86.2	89.5	93.5	95.2	95.2	97.0	98.0	98.3	98.3
≥ 200	27.0	60.6	70.5	78.3	86.2	89.5	93.5	95.3	95.3	97.3	98.5	98.9	99.1
≥ 100	27.0	60.6	70.5	78.3	86.2	89.5	93.5	95.3	95.3	97.3	98.7	99.1	99.3
≥ 0	27.0	60.6	70.5	78.3	86.2	89.5	93.5	95.3	95.3	97.3	98.7	99.3	99.4

TOTAL NUMBER OF OBSERVATIONS

1200

DIRNAVOCEANMET SMOS

2

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

JUL  
MONTH

01  
HOURS (LST)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)											
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ 5/16
NO CEILING	25.2	47.1	54.8	56.1	58.7	60.7	61.9	63.2	63.2	63.2	63.2	63.2
≥ 20000	25.2	50.3	58.7	61.3	63.9	65.6	67.7	69.0	69.0	69.0	69.0	69.0
≥ 18000	25.2	50.3	58.7	61.3	63.9	65.6	67.7	69.0	69.0	69.0	69.0	69.0
≥ 16000	25.2	50.3	58.7	61.3	63.9	65.6	67.7	69.0	69.0	69.0	69.0	69.0
≥ 14000	25.2	50.3	58.7	61.3	63.9	65.6	67.7	69.0	69.0	69.0	69.0	69.0
≥ 12000	25.2	51.6	60.0	62.6	65.2	67.1	69.0	70.3	70.3	70.3	70.3	70.3
≥ 10000	25.2	52.9	61.3	63.9	67.7	69.7	72.3	73.6	74.2	74.2	74.2	74.2
≥ 9000	25.2	52.9	61.3	63.9	67.7	69.7	72.3	73.6	74.2	74.2	74.2	74.2
≥ 8000	25.2	54.2	63.2	65.8	69.7	71.6	74.2	75.5	76.1	76.1	76.1	76.1
≥ 7000	25.2	54.2	63.2	65.8	69.7	71.6	74.2	75.5	76.1	76.1	76.1	76.1
≥ 6000	25.2	55.5	65.2	67.7	71.6	73.6	76.1	78.7	78.7	78.7	78.7	78.7
≥ 5000	25.8	56.8	66.5	69.0	73.6	75.5	78.7	80.7	80.7	80.7	80.7	80.7
≥ 4500	27.1	58.1	67.7	70.3	74.8	76.8	79.4	81.9	81.9	81.9	81.9	81.9
≥ 4000	27.7	59.4	69.0	71.6	76.8	78.7	81.3	83.2	84.5	84.5	84.5	84.5
≥ 3500	27.7	59.4	69.0	71.6	77.4	79.4	81.9	83.9	85.2	85.2	85.2	85.2
≥ 3000	28.4	60.7	70.3	73.6	79.4	81.9	85.2	87.7	89.0	89.7	89.7	89.7
≥ 2500	28.4	60.7	70.3	73.6	79.4	81.9	85.8	89.0	90.3	91.0	91.0	91.0
≥ 2000	28.4	60.7	70.3	73.6	79.4	81.9	85.8	89.0	90.3	91.0	91.0	91.0
≥ 1800	28.4	60.7	70.3	73.6	79.4	81.9	85.8	89.0	90.3	91.0	91.0	91.0
≥ 1500	28.4	61.9	71.6	74.8	80.7	83.2	87.1	90.3	91.6	92.9	92.9	92.9
≥ 1200	28.4	61.9	71.6	75.5	81.3	83.9	87.7	91.0	92.3	93.6	93.6	93.6
≥ 1000	28.4	61.9	71.6	75.5	81.3	83.9	87.7	91.6	92.9	94.2	94.8	94.8
≥ 900	28.4	61.9	71.6	75.5	81.3	83.9	87.7	91.6	92.9	94.2	94.8	94.8
≥ 800	28.4	62.6	72.9	76.8	82.6	85.2	89.0	92.9	94.2	95.5	96.1	96.1
≥ 700	28.4	62.6	72.9	76.8	82.6	85.2	89.0	92.9	94.2	95.5	96.1	96.1
≥ 600	28.4	62.6	72.9	76.8	83.2	85.8	89.7	93.6	94.8	96.1	96.8	97.4
≥ 500	28.4	62.6	72.9	76.8	83.2	85.8	89.7	93.6	94.8	96.1	96.8	97.4
≥ 400	28.4	62.6	72.9	76.8	83.2	86.5	91.0	94.8	96.1	97.4	99.4	99.4
≥ 300	28.4	62.6	72.9	76.8	83.2	86.5	91.0	94.8	96.1	97.4	99.4	99.4
≥ 200	28.4	62.6	72.9	76.8	83.2	86.5	91.0	94.8	96.1	97.4	99.4	99.4
≥ 100	28.4	62.6	72.9	76.8	83.2	86.5	91.0	94.8	96.1	97.4	99.4	99.4
0	28.4	62.6	72.9	76.8	83.2	86.5	91.0	94.8	96.1	97.4	99.4	99.4

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUL

NORTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

04  
HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	20.0	33.6	38.1	41.9	44.5	47.7	51.0	52.9	52.9	53.6	54.8	54.8	54.8
≥ 20000	20.7	36.1	41.9	46.5	50.3	53.6	56.8	58.7	58.7	60.7	61.9	61.9	61.9
≥ 18000	20.7	36.1	41.9	46.5	50.3	53.6	56.8	58.7	58.7	60.7	61.9	61.9	61.9
≥ 16000	20.7	36.1	41.9	46.5	50.3	53.6	56.8	58.7	58.7	60.7	61.9	61.9	61.9
≥ 14000	20.7	36.1	41.9	46.5	50.3	53.6	56.8	58.7	58.7	60.7	61.9	61.9	61.9
≥ 12000	20.7	36.1	41.9	46.5	50.3	53.6	56.8	58.7	58.7	60.7	61.9	61.9	61.9
≥ 10000	23.9	40.7	46.5	51.0	54.8	58.1	61.3	63.9	63.9	65.8	67.1	67.1	67.1
≥ 9000	24.5	41.3	47.1	51.6	55.5	58.7	61.9	64.5	64.5	66.5	67.7	67.7	67.7
≥ 8000	24.5	42.6	48.4	53.6	58.1	61.9	65.2	68.4	68.4	70.3	71.6	71.6	71.6
≥ 7000	24.5	42.6	48.4	53.6	58.7	62.6	65.8	69.0	69.0	71.0	72.3	72.3	72.3
≥ 6000	24.5	43.2	49.0	54.2	59.4	63.2	66.5	69.7	69.7	71.6	72.9	72.9	72.9
≥ 5000	24.5	43.2	49.0	54.8	60.0	63.9	67.1	70.3	70.3	72.3	73.6	73.6	73.6
≥ 4500	24.5	43.2	49.0	54.8	60.0	63.9	67.1	70.3	70.3	72.3	73.6	73.6	73.6
≥ 4000	25.2	44.5	50.3	55.1	62.6	66.5	69.7	72.9	72.9	74.8	76.1	76.1	76.1
≥ 3500	25.8	45.2	51.0	56.8	63.2	67.1	70.3	73.6	73.6	75.5	76.8	76.8	76.8
≥ 3000	26.5	46.5	52.9	58.7	65.8	69.7	74.2	77.4	77.4	79.4	80.7	80.7	80.7
≥ 2500	27.1	47.1	53.6	59.4	67.7	71.6	76.1	79.4	79.4	81.3	82.6	82.6	82.6
≥ 2000	27.1	47.7	54.8	60.7	69.7	73.6	78.1	81.3	81.3	83.2	84.5	84.5	84.5
≥ 1800	27.1	47.7	54.8	60.7	69.7	73.6	78.1	81.3	81.3	83.2	84.5	84.5	84.5
≥ 1500	27.1	47.7	54.8	60.7	69.7	73.6	78.1	81.3	81.3	83.2	84.5	84.5	84.5
≥ 1200	27.1	48.4	56.1	62.6	71.6	75.5	80.0	84.5	84.5	86.5	88.4	88.4	88.4
≥ 1000	27.1	49.7	57.4	63.9	72.9	76.8	81.3	85.8	85.8	88.4	90.3	90.3	90.3
≥ 900	27.1	49.7	57.4	63.9	72.9	76.8	81.3	85.8	85.8	88.4	90.3	90.3	90.3
≥ 800	27.1	50.3	58.1	65.2	74.2	78.7	83.2	87.7	87.7	91.0	92.9	92.9	92.9
≥ 700	27.1	50.3	58.1	65.2	74.2	78.7	83.2	87.7	87.7	91.0	92.9	92.9	92.9
≥ 600	27.1	50.3	58.1	65.2	74.2	78.7	83.2	87.7	87.7	91.0	92.9	92.9	92.9
≥ 500	27.1	50.3	58.1	65.2	74.2	78.7	83.2	87.7	87.7	91.0	92.9	92.9	92.9
≥ 400	27.1	50.3	58.1	65.2	74.2	78.7	83.2	87.7	87.7	91.0	92.9	92.9	92.9
≥ 300	27.1	50.3	58.1	65.8	74.8	79.4	83.9	89.7	89.7	92.9	94.8	94.8	94.8
≥ 200	27.1	50.3	58.1	65.8	74.8	79.4	83.9	89.7	89.7	92.9	94.8	94.8	94.8
≥ 100	27.1	50.3	58.1	65.8	74.8	79.4	83.9	89.7	89.7	92.9	94.8	94.8	94.8
0	27.1	50.3	58.1	65.8	74.8	79.4	83.9	89.7	89.7	92.9	94.8	94.8	94.8

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

JUL  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

07  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)											
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ 5/16
NO CEILING	14.2	33.6	37.4	41.9	46.5	48.4	49.7	51.6	51.6	53.6	53.6	53.6
≥ 20000	14.2	36.1	40.0	46.5	51.0	52.9	54.2	56.1	56.1	58.1	58.1	58.1
≥ 18000	14.2	36.1	40.0	46.5	51.0	52.9	54.2	56.1	56.1	58.1	58.1	58.1
≥ 16000	14.2	36.1	40.0	46.5	51.0	52.9	54.2	56.1	56.1	58.1	58.1	58.1
≥ 14000	14.2	36.1	40.0	46.5	51.0	52.9	54.2	56.1	56.1	58.1	58.1	58.1
≥ 12000	14.2	36.8	41.3	49.0	54.2	56.8	58.1	60.0	60.0	62.6	62.6	62.6
≥ 10000	14.8	38.1	42.6	51.0	56.8	60.0	61.3	63.2	63.2	65.8	65.8	65.8
≥ 9000	14.8	38.1	42.6	51.0	56.8	60.0	61.3	63.2	63.2	65.8	65.8	65.8
≥ 8000	14.8	40.7	45.2	53.6	59.4	62.6	64.5	66.5	66.5	69.0	69.0	69.0
≥ 7000	14.8	40.7	45.2	53.6	59.4	62.6	64.5	66.5	66.5	69.0	69.0	69.0
≥ 6000	14.8	40.7	45.2	53.6	59.4	63.9	67.7	69.7	69.7	72.3	72.3	72.3
≥ 5000	14.8	41.3	45.6	54.2	60.0	64.5	69.0	71.6	71.6	74.8	74.8	74.8
≥ 4500	14.8	41.3	45.6	54.2	60.0	64.5	69.0	71.6	71.6	74.8	74.8	74.8
≥ 4000	14.8	42.6	47.1	56.1	61.9	66.5	71.0	73.6	73.6	76.8	76.8	76.8
≥ 3500	14.8	42.6	47.1	56.1	61.9	66.5	71.0	73.6	73.6	76.8	76.8	76.8
≥ 3000	14.8	42.6	47.1	56.1	61.9	66.5	71.0	73.6	73.6	76.8	76.8	76.8
≥ 2500	14.8	43.9	48.4	58.1	65.2	69.7	74.8	78.1	78.1	81.3	81.3	81.3
≥ 2000	14.8	43.9	48.4	58.1	65.2	69.7	74.8	78.1	78.1	81.3	81.3	81.3
≥ 1800	14.8	43.9	48.4	58.1	65.2	69.7	74.8	78.1	78.1	81.3	81.3	81.3
≥ 1500	14.8	43.9	48.4	58.1	65.2	69.7	74.8	78.1	78.1	81.3	81.3	81.3
≥ 1200	14.8	44.5	49.7	59.4	67.1	72.9	79.4	82.6	82.6	85.2	85.2	85.2
≥ 1000	14.8	44.5	49.7	59.4	67.1	72.9	79.4	82.6	82.6	85.2	85.2	85.2
≥ 900	14.8	44.5	50.3	60.0	68.4	74.8	81.3	85.2	85.2	87.1	87.1	87.1
≥ 800	14.8	45.2	51.6	61.3	69.7	76.1	83.9	88.4	88.4	92.9	92.9	92.9
≥ 700	14.8	45.2	51.6	61.3	69.7	76.1	83.9	88.4	88.4	92.9	92.9	92.9
≥ 600	14.8	45.2	51.6	61.3	69.7	76.1	83.9	88.4	88.4	92.9	92.9	92.9
≥ 500	14.8	45.2	51.6	61.3	69.7	76.1	83.9	88.4	88.4	92.9	92.9	92.9
≥ 400	14.8	45.2	51.6	61.3	69.7	76.1	83.9	88.4	88.4	92.9	92.9	92.9
≥ 300	14.8	45.2	51.6	61.3	69.7	76.1	83.9	88.4	88.4	92.9	92.9	92.9
≥ 200	14.8	45.2	51.6	61.3	69.7	76.1	83.9	88.4	88.4	92.9	92.9	92.9
≥ 100	14.8	45.2	51.6	61.3	69.7	76.1	83.9	88.4	88.4	92.9	92.9	92.9
0	14.8	45.2	51.6	61.3	69.7	76.1	83.9	88.4	88.4	92.9	92.9	92.9

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

JUL  
MONTH

10  
HOURS (L.S.T.)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)											
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ 5/16
NO CEILING	19.4	41.9	47.7	51.6	52.9	53.6	53.6	54.2	54.2	54.2	54.2	54.2
≥ 20000	19.4	43.9	50.3	56.1	58.1	58.7	58.7	59.4	59.4	59.4	59.4	59.4
AI 18000	19.4	43.9	50.3	56.1	58.1	58.7	58.7	59.4	59.4	59.4	59.4	59.4
AI 16000	19.4	43.9	50.3	56.1	58.1	58.7	58.7	59.4	59.4	59.4	59.4	59.4
AI 14000	19.4	44.5	51.0	56.3	59.7	59.4	59.4	60.0	60.0	60.0	60.0	60.0
AI 12000	20.0	45.8	52.3	58.7	60.7	61.3	61.3	61.9	61.9	61.9	61.9	61.9
10000	20.7	48.4	55.5	62.6	64.5	65.2	65.2	65.8	65.8	65.8	65.8	65.8
AI 9000	20.7	48.4	55.5	62.6	64.5	65.8	65.8	66.5	66.5	66.5	66.5	66.5
8000	20.7	51.0	58.1	65.2	68.4	69.7	69.7	70.3	70.3	70.3	70.3	70.3
AI 7000	20.7	52.3	59.4	66.5	69.7	71.0	71.0	71.6	71.6	71.6	71.6	71.6
6000	20.7	52.3	60.0	67.1	70.3	71.6	71.6	72.3	72.3	72.3	72.3	72.3
AI 5000	20.7	54.2	61.9	69.0	72.9	74.2	74.2	74.8	74.8	74.8	74.8	74.8
4500	20.7	54.2	61.9	69.0	73.6	74.8	74.8	75.5	75.5	75.5	75.5	75.5
AI 4000	20.7	55.5	63.2	70.3	74.8	76.1	76.1	76.8	76.8	76.8	76.8	76.8
3500	20.7	56.1	63.9	71.0	75.5	76.8	76.8	77.4	77.4	78.1	78.1	78.1
AI 3000	21.3	56.8	65.2	73.6	78.7	80.0	80.0	80.7	80.7	81.3	81.3	81.3
2500	21.3	57.4	65.8	74.2	80.0	81.9	81.9	82.6	82.6	83.2	83.2	83.2
AI 2000	21.3	58.1	67.1	75.5	81.9	83.9	83.9	84.5	84.5	85.2	85.2	85.2
1800	21.3	58.1	67.1	75.5	81.9	83.9	83.9	84.5	84.5	85.2	85.2	85.2
AI 1500	21.3	59.4	68.4	76.1	85.8	87.7	88.4	89.0	89.0	89.7	89.7	89.7
1200	21.3	60.7	70.3	80.7	88.4	90.3	91.0	91.6	92.3	92.3	92.3	92.3
AI 1000	21.3	60.7	70.3	81.3	89.7	93.6	94.8	95.5	96.1	96.1	96.1	96.1
900	21.3	60.7	70.3	81.3	89.7	93.6	93.6	95.5	96.1	96.8	96.8	96.8
AI 800	21.3	60.7	70.3	81.3	89.7	93.6	93.6	95.5	96.1	96.8	96.8	96.8
700	21.3	60.7	70.3	81.3	90.3	94.2	94.2	96.8	97.4	97.4	97.4	97.4
AI 600	21.3	60.7	70.3	81.3	90.3	94.2	94.2	96.8	97.4	98.1	98.1	98.1
500	21.3	60.7	70.3	81.3	90.3	94.2	94.2	96.8	97.4	98.1	98.1	98.1
AI 400	21.3	60.7	70.3	81.3	90.3	94.2	94.2	97.4	98.1	98.7	98.7	98.7
300	21.3	60.7	70.3	81.3	90.3	94.2	94.2	97.4	98.1	98.7	98.7	98.7
AI 200	21.3	60.7	70.3	81.3	90.3	94.2	94.2	97.4	98.7	99.4	99.4	99.4
100	21.3	60.7	70.3	81.3	90.3	94.2	94.2	97.4	98.7	99.4	99.4	99.4
0	21.3	60.7	70.3	81.3	90.3	94.2	94.2	97.4	98.7	99.4	99.4	99.4

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

73-77

WILLOW GROVE, PENNSYLVANIA

JUL

STATION NAME

YEARS

NORTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

13  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1	≥ ¾	≥ 5/16
NO CEILING	16.8	40.7	44.5	47.1	48.4	48.4	48.4	48.4	48.4	48.4	48.4
≥ 20000	16.1	43.9	47.7	52.9	54.2	54.2	54.2	54.2	54.2	54.2	54.2
≥ 18000	16.1	43.9	47.7	52.9	54.2	54.2	54.2	54.2	54.2	54.2	54.2
≥ 16000	16.1	43.9	47.7	52.9	54.2	54.2	54.2	54.2	54.2	54.2	54.2
≥ 14000	16.1	44.5	48.4	53.6	54.8	54.8	54.8	54.8	54.8	54.8	54.8
≥ 12000	16.1	44.5	48.4	54.2	55.5	55.5	55.5	55.5	55.5	55.5	55.5
≥ 10000	16.7	46.5	51.6	58.1	59.4	59.4	59.4	59.4	59.4	59.4	59.4
≥ 9000	16.7	46.5	51.6	58.1	59.4	59.4	59.4	59.4	59.4	59.4	59.4
≥ 8000	16.7	48.4	53.6	60.0	61.3	61.3	61.3	61.3	61.3	61.3	61.3
≥ 7000	16.7	48.4	53.6	60.7	61.9	61.9	61.9	61.9	61.9	61.9	61.9
≥ 6000	16.7	49.0	54.8	61.9	63.2	63.2	63.2	63.2	63.2	63.2	63.2
≥ 5000	16.7	49.7	55.5	63.2	64.5	64.5	64.5	64.5	64.5	64.5	64.5
≥ 4500	16.7	49.7	56.1	64.5	65.8	65.8	65.8	65.8	65.8	65.8	65.8
≥ 4000	19.4	52.9	60.7	69.7	71.6	71.6	71.6	72.3	72.3	72.3	72.3
≥ 3500	20.0	55.5	63.9	72.9	75.5	75.5	75.5	76.1	76.1	76.1	76.1
≥ 3000	21.9	63.2	72.3	82.6	85.8	86.5	86.5	87.1	87.1	87.1	87.1
≥ 2500	21.9	63.9	73.6	84.5	89.0	89.7	89.7	90.3	90.3	90.3	90.3
≥ 2000	21.9	64.5	74.8	86.5	91.0	91.6	91.6	92.3	92.3	92.3	92.3
≥ 1800	21.9	64.5	74.8	86.5	91.6	92.3	92.3	92.9	92.9	92.9	92.9
≥ 1500	21.9	64.5	75.5	88.4	93.6	95.5	95.5	96.1	96.1	96.1	96.1
≥ 1200	21.9	64.5	75.5	88.4	93.6	95.5	95.5	96.1	96.1	96.1	96.1
≥ 1000	21.9	64.5	76.1	89.0	94.2	96.8	96.8	97.4	97.4	97.4	97.4
≥ 900	21.9	64.5	76.1	89.0	94.2	96.8	96.8	97.4	97.4	97.4	97.4
≥ 800	21.9	65.2	76.8	89.7	95.5	98.1	98.1	98.7	98.7	98.7	98.7
≥ 700	21.9	65.2	76.8	89.7	95.5	98.1	98.1	98.7	98.7	98.7	98.7
≥ 600	21.9	65.2	76.8	89.7	96.1	98.7	98.7	99.4	99.4	99.4	99.4
≥ 500	21.9	65.2	76.8	89.7	96.1	98.7	98.7	99.4	99.4	99.4	99.4
≥ 400	21.9	65.2	76.8	89.7	96.1	98.7	98.7	99.4	99.4	99.4	99.4
≥ 300	21.9	65.2	76.8	89.7	96.1	98.7	98.7	99.4	99.4	99.4	99.4
≥ 200	21.9	65.2	76.8	89.7	96.1	98.7	98.7	99.4	99.4	99.4	99.4
≥ 100	21.9	65.2	76.8	89.7	96.1	98.7	98.7	99.4	99.4	99.4	99.4
0	21.9	65.2	76.8	89.7	96.1	98.7	98.7	99.4	99.4	99.4	99.4

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

JUL  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

16  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1	≥ ¾	≥ ½
NO CEILING	17.4	38.7	44.5	49.0	51.0	51.0	51.6	51.6	51.6	51.6	51.6
≥ 20000	18.7	43.2	50.3	56.1	58.1	58.1	58.7	58.7	58.7	58.7	58.7
≥ 18000	18.7	43.9	51.0	56.8	58.7	58.7	59.4	59.4	59.4	59.4	59.4
≥ 16000	18.7	43.9	51.0	56.8	58.7	58.7	59.4	59.4	59.4	59.4	59.4
≥ 14000	18.7	43.9	51.0	56.8	58.7	58.7	59.4	59.4	59.4	59.4	59.4
≥ 12000	18.7	43.9	51.0	56.8	58.7	58.7	59.4	59.4	59.4	59.4	59.4
≥ 10000	19.4	47.1	54.8	62.6	64.5	64.5	65.2	65.2	65.2	65.2	65.2
≥ 9000	20.0	47.7	55.5	63.9	65.8	65.8	66.5	66.5	66.5	66.5	66.5
≥ 8000	20.0	49.0	57.4	66.5	68.4	68.4	69.0	69.0	69.0	69.0	69.0
≥ 7000	20.0	49.0	57.4	66.5	68.4	68.4	69.0	69.0	69.0	69.0	69.0
≥ 6000	20.7	49.7	58.1	67.1	69.0	69.0	69.7	69.7	69.7	69.7	69.7
≥ 5000	20.7	49.7	58.7	68.4	71.6	71.6	72.3	72.3	72.3	72.3	72.3
≥ 4500	20.7	51.0	60.7	71.0	74.2	74.2	74.8	74.8	74.8	74.8	74.8
≥ 4000	20.7	54.2	63.9	74.2	77.4	77.4	78.1	78.1	78.1	78.1	78.1
≥ 3500	21.3	56.1	66.5	77.4	80.7	80.7	81.3	81.3	81.3	81.3	81.3
≥ 3000	21.3	59.4	70.3	83.2	87.1	87.1	87.7	87.7	87.7	87.7	87.7
≥ 2500	21.3	60.0	71.6	85.8	89.7	89.7	91.0	91.0	91.0	91.0	91.0
≥ 2000	21.3	60.7	72.3	86.5	90.3	91.6	92.3	92.3	92.3	92.3	92.3
≥ 1800	21.3	60.7	72.9	87.1	91.0	92.3	92.9	92.9	92.9	92.9	92.9
≥ 1500	21.3	60.7	72.9	87.7	92.9	94.8	95.5	95.5	95.5	95.5	95.5
≥ 1200	21.3	60.7	72.9	87.7	92.9	94.8	95.5	95.5	95.5	95.5	95.5
≥ 1000	21.3	60.7	72.9	87.7	92.9	95.5	96.1	96.1	96.1	96.1	96.1
≥ 900	21.3	60.7	72.9	87.7	92.9	95.5	96.1	96.1	96.1	96.1	96.1
≥ 800	21.3	61.3	73.6	88.4	94.8	97.4	98.1	98.1	98.1	98.1	98.1
≥ 700	21.3	61.3	74.2	89.0	95.5	98.1	98.7	98.7	98.7	98.7	98.7
≥ 600	21.3	61.3	74.8	89.7	96.1	98.7	99.4	99.4	99.4	99.4	99.4
≥ 500	21.3	61.3	74.8	89.7	96.1	98.7	99.4	99.4	99.4	99.4	99.4
≥ 400	21.3	61.3	74.8	89.7	96.1	98.7	99.4	99.4	99.4	99.4	99.4
≥ 300	21.3	61.3	74.8	89.7	96.1	98.7	99.4	99.4	99.4	99.4	99.4
≥ 200	21.3	61.3	74.8	89.7	96.1	98.7	99.4	99.4	99.4	99.4	99.4
≥ 100	21.3	61.3	74.8	89.7	96.1	98.7	99.4	99.4	99.4	99.4	99.4
≥ 0	21.3	61.3	74.8	89.7	96.1	98.7	99.4	99.4	99.4	99.4	99.4

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

JUL

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

19

HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾
NO CEILING	16.8	40.7	51.6	58.1	58.7	59.4	60.0	60.0	60.0	60.0	60.0
≥ 20000	18.1	44.5	56.1	62.6	65.2	65.8	66.5	66.5	66.5	66.5	66.5
18000	18.1	44.5	56.1	62.6	65.2	65.8	66.5	66.5	66.5	66.5	66.5
≥ 16000	18.1	44.5	56.1	62.6	65.2	65.8	66.5	66.5	66.5	66.5	66.5
14000	18.1	44.5	56.1	63.2	65.8	66.5	67.1	67.1	67.1	67.1	67.1
≥ 12000	18.7	46.5	58.1	65.8	68.4	69.0	69.7	69.7	69.7	69.7	69.7
10000	18.7	48.4	61.3	71.6	74.8	75.5	76.1	76.1	76.1	76.1	76.1
≥ 9000	18.7	48.4	61.3	71.6	75.5	76.1	76.8	76.8	76.8	76.8	76.8
8000	18.7	52.3	65.8	77.4	81.9	82.6	83.2	83.2	83.2	83.2	83.2
≥ 7000	18.7	52.3	65.8	78.1	82.6	83.2	83.9	83.9	83.9	83.9	83.9
6000	18.7	52.9	66.5	78.7	83.2	83.9	84.5	84.5	84.5	84.5	84.5
≥ 5000	18.7	53.6	67.1	79.4	83.9	84.5	85.2	85.2	85.2	85.2	85.2
4500	19.4	54.2	67.7	80.0	84.5	85.2	85.8	85.8	85.8	85.8	85.8
4000	20.0	56.1	70.3	83.2	87.7	88.4	89.7	89.7	89.7	89.7	89.7
3500	20.0	56.1	70.3	83.2	87.7	89.0	90.3	91.0	91.0	91.0	91.0
3000	20.0	57.4	71.6	85.2	91.0	92.3	93.6	94.2	94.2	94.2	94.2
2500	20.0	57.4	71.6	86.5	92.9	94.2	95.5	96.1	96.1	96.1	96.1
2000	20.0	57.4	71.6	86.5	92.9	94.2	95.5	96.1	96.1	96.1	96.1
1800	20.0	57.4	71.6	86.5	92.9	94.2	95.5	96.1	96.1	96.1	96.1
1500	20.0	57.4	72.3	87.1	94.2	95.5	96.8	97.4	97.4	98.1	98.1
1200	20.0	57.4	72.3	87.1	94.2	95.5	96.8	97.4	97.4	98.1	98.1
1000	20.0	57.4	72.3	87.1	94.2	96.1	97.4	98.1	98.1	98.1	98.1
900	20.0	57.4	72.3	87.1	94.2	96.1	97.4	98.1	98.1	98.1	98.1
800	20.0	57.4	72.3	87.1	94.2	96.1	97.4	98.1	98.1	98.1	98.1
700	20.0	57.4	72.3	87.1	94.2	96.1	97.4	98.1	98.1	98.1	98.1
600	20.0	58.1	72.9	87.7	94.8	96.8	98.1	98.7	98.7	98.7	98.7
500	20.0	58.1	72.9	87.7	94.8	96.8	98.1	98.7	98.7	98.7	98.7
400	20.0	58.1	72.9	87.7	94.8	96.8	98.1	98.7	98.7	98.7	98.7
300	20.0	58.1	73.6	88.4	95.5	97.4	98.7	99.4	99.4	99.4	99.4
200	20.0	58.1	73.6	88.4	95.5	97.4	98.7	99.4	99.4	99.4	99.4
100	20.0	58.1	73.6	88.4	95.5	97.4	98.7	99.4	99.4	99.4	99.4
0	20.0	58.1	73.6	88.4	95.5	97.4	98.7	99.4	99.4	99.4	99.4

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

JUL

STATION

YEAR

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

22  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)											
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ 5/16
NO CEILING	25.2	43.2	50.3	54.8	57.4	58.7	59.4	59.4	59.4	59.4	59.4	59.4
≥ 20000	25.8	45.2	53.6	59.4	61.9	63.2	64.5	64.5	64.5	64.5	64.5	64.5
≥ 18000	26.5	46.5	54.8	60.7	63.9	65.2	66.5	66.5	66.5	66.5	66.5	66.5
≥ 16000	26.5	46.5	54.8	60.7	63.9	65.2	66.5	66.5	66.5	66.5	66.5	66.5
≥ 14000	26.5	46.5	54.8	60.7	63.9	65.2	66.5	66.5	66.5	66.5	66.5	66.5
≥ 12000	27.1	49.0	58.1	63.9	67.1	68.4	69.7	69.7	69.7	69.7	69.7	69.7
≥ 10000	27.7	50.3	59.4	65.2	68.4	69.7	71.6	71.6	71.6	71.6	71.6	71.6
≥ 9000	27.7	50.3	59.4	65.2	69.0	71.0	72.9	72.9	72.9	72.9	72.9	72.9
≥ 8000	29.7	53.6	62.6	69.7	74.8	76.8	78.7	78.7	78.7	78.7	78.7	78.7
≥ 7000	29.7	54.8	63.9	71.0	76.1	78.1	81.3	81.3	81.3	81.3	81.3	81.3
≥ 6000	29.7	56.8	66.5	73.6	78.7	80.7	83.9	84.5	84.5	84.5	84.5	84.5
≥ 5000	30.3	57.4	67.1	74.2	79.4	81.3	84.5	84.5	84.5	85.2	85.2	85.2
≥ 4500	31.0	58.1	67.7	74.8	80.0	81.9	85.2	85.2	85.2	85.8	85.8	85.8
≥ 4000	31.0	59.4	69.0	76.1	81.9	83.9	87.7	87.7	87.7	88.4	89.0	89.0
≥ 3500	31.0	59.4	69.0	76.1	81.9	83.9	87.7	87.7	87.7	88.4	89.0	89.0
≥ 3000	31.0	60.7	71.6	78.7	86.5	88.4	92.3	92.3	92.3	93.6	93.6	93.6
≥ 2500	31.0	60.7	71.6	78.7	86.5	88.4	92.3	92.3	92.3	93.6	93.6	93.6
≥ 2000	31.0	60.7	71.6	78.7	86.5	88.4	92.3	92.3	92.3	93.6	93.6	93.6
≥ 1800	31.0	60.7	71.6	78.7	86.5	88.4	92.3	92.3	92.3	93.6	93.6	93.6
≥ 1500	31.0	61.3	72.3	79.4	87.1	89.7	93.6	93.6	93.6	94.8	94.8	94.8
≥ 1200	31.0	61.3	72.3	79.4	87.1	89.7	93.6	93.6	93.6	94.8	94.8	94.8
≥ 1000	31.0	61.3	72.3	79.4	87.1	89.7	93.6	93.6	93.6	94.8	94.8	94.8
≥ 900	31.0	61.3	72.3	79.4	87.1	89.7	93.6	93.6	93.6	94.8	94.8	94.8
≥ 800	31.0	61.3	72.3	79.4	87.1	89.7	93.6	93.6	93.6	94.8	94.8	94.8
≥ 700	31.0	61.3	72.3	79.4	87.1	89.7	93.6	93.6	93.6	94.8	94.8	94.8
≥ 600	31.0	61.3	72.3	79.4	87.1	89.7	93.6	93.6	93.6	94.8	94.8	94.8
≥ 500	31.0	61.3	72.3	79.4	87.1	89.7	93.6	93.6	93.6	94.8	94.8	94.8
≥ 400	31.0	61.3	72.3	79.4	87.1	89.7	93.6	93.6	93.6	94.8	94.8	94.8
≥ 300	31.0	61.3	72.3	79.4	87.1	89.7	93.6	93.6	93.6	94.8	94.8	94.8
≥ 200	31.0	61.3	72.3	79.4	87.1	89.7	93.6	93.6	93.6	94.8	94.8	94.8
≥ 100	31.0	61.3	72.3	79.4	87.1	89.7	93.6	93.6	93.6	94.8	94.8	94.8
0	31.0	61.3	72.3	79.4	87.1	89.7	93.6	93.6	93.6	94.8	94.8	94.8

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

## CEILING VERSUS VISIBILITY

14793  
STATIONWILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

JUL  
MONTHPERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)ALL  
HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)														
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	≥ 0
NO CEILING	19.4	39.9	46.1	50.1	52.3	53.5	54.4	55.2	55.2	55.5	55.7	55.7	55.7	55.7	55.7
≥ 20000	20.0	42.9	49.8	55.2	57.8	59.0	60.2	60.9	60.9	61.4	61.5	61.5	61.5	61.5	61.5
≥ 18000	20.1	43.2	50.1	55.4	58.2	59.4	60.5	61.2	61.2	61.7	61.9	61.9	61.9	61.9	61.9
≥ 16000	20.1	43.2	50.1	55.4	58.2	59.4	60.5	61.2	61.2	61.7	61.9	61.9	61.9	61.9	61.9
≥ 14000	20.1	43.3	50.2	55.7	58.4	59.6	60.7	61.5	61.5	62.0	62.2	62.2	62.2	62.2	62.3
≥ 12000	20.3	44.3	51.4	57.2	60.0	61.3	62.4	63.2	63.2	63.7	63.9	63.9	63.9	63.9	64.0
≥ 10000	21.1	46.5	54.1	60.7	63.9	65.2	66.5	67.3	67.4	68.0	68.2	68.2	68.2	68.2	68.2
≥ 9000	21.3	46.7	54.3	61.0	64.3	65.8	67.1	67.9	68.0	68.6	68.7	68.7	68.7	68.7	68.8
≥ 8000	21.5	49.0	56.8	64.0	67.7	69.4	70.7	71.6	71.7	72.3	72.4	72.4	72.5	72.5	72.6
≥ 7000	21.5	49.3	57.1	64.4	68.3	69.9	71.3	72.3	72.4	73.0	73.2	73.2	73.2	73.2	73.3
≥ 6000	21.6	50.0	58.2	65.5	69.4	71.1	72.9	73.9	74.0	74.6	74.8	74.8	74.8	74.8	74.9
≥ 5000	21.8	50.7	59.0	66.5	70.7	72.5	74.4	75.4	75.5	76.2	76.4	76.4	76.5	76.5	76.5
≥ 4500	22.1	51.2	59.6	67.3	71.6	73.4	75.2	76.4	76.5	77.2	77.3	77.3	77.4	77.5	77.6
≥ 4000	22.4	53.1	61.7	69.7	74.4	76.1	78.2	79.3	79.4	80.2	80.5	80.5	80.6	80.7	80.7
≥ 3500	22.7	53.8	62.6	70.7	75.5	77.3	79.4	80.6	80.7	81.6	81.9	81.9	81.9	82.0	82.1
≥ 3000	23.2	55.9	65.2	74.0	79.8	81.8	84.1	85.5	85.7	86.6	86.9	86.9	87.0	87.1	87.2
≥ 2500	23.2	56.4	65.8	75.1	81.3	83.6	85.9	87.3	87.4	88.4	88.6	88.6	88.7	88.8	89.0
≥ 2000	23.2	56.7	66.4	75.7	82.1	84.4	86.9	88.3	88.5	89.4	89.7	89.7	89.8	89.9	90.0
≥ 1800	23.2	56.7	66.5	75.8	82.3	84.5	87.0	88.5	88.6	89.6	89.8	89.8	89.9	90.0	90.2
≥ 1500	23.2	57.1	67.2	77.0	84.0	86.6	89.3	90.7	90.9	92.0	92.3	92.3	92.4	92.5	92.7
≥ 1200	23.2	57.4	67.6	77.6	84.5	87.3	89.9	91.6	91.8	92.9	93.2	93.2	93.3	93.4	93.6
≥ 1000	23.2	57.6	67.9	78.0	85.2	88.5	91.2	93.2	93.4	94.6	95.0	95.0	95.1	95.2	95.4
≥ 900	23.2	57.6	68.0	78.1	85.2	88.6	91.4	93.4	93.6	94.8	95.2	95.2	95.4	95.5	95.6
≥ 800	23.2	58.0	68.6	78.7	86.1	89.5	92.6	94.7	94.8	96.2	96.6	96.6	96.8	97.0	97.1
≥ 700	23.2	58.0	68.6	78.8	86.3	89.7	92.8	94.9	95.1	96.5	96.9	96.9	97.0	97.2	97.3
≥ 600	23.2	58.1	68.8	79.0	86.7	90.1	93.4	95.6	95.7	97.1	97.6	97.6	97.8	98.0	98.2
≥ 500	23.2	58.1	68.8	79.0	86.8	90.2	93.6	95.7	95.9	97.3	97.9	97.9	98.2	98.3	98.6
≥ 400	23.2	58.1	68.8	79.0	86.8	90.2	93.7	95.9	96.1	97.4	98.1	98.1	98.3	98.6	98.8
≥ 300	23.2	58.1	68.9	79.2	87.1	90.6	94.1	96.5	96.6	98.0	98.6	98.6	98.9	99.1	99.4
≥ 200	23.2	58.1	68.9	79.2	87.1	90.6	94.1	96.5	96.7	98.1	98.7	98.7	99.1	99.4	99.8
≥ 100	23.2	58.1	68.9	79.2	87.1	90.6	94.1	96.5	96.7	98.1	98.7	98.7	99.2	99.4	99.9
≥ 0	23.2	58.1	68.9	79.2	87.1	90.6	94.1	96.5	96.7	98.1	98.7	98.7	99.2	99.4	100.0

TOTAL NUMBER OF OBSERVATIONS

1240

## CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

AUG

STATION

STATION NAME

YEARS

MONTH

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

01

HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)														
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	≥ 0
NO CEILING	18.7	35.5	38.7	47.1	52.9	56.1	58.1	58.7	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 20000	19.4	37.4	40.7	50.3	56.1	60.0	63.2	63.9	63.9	65.8	65.8	65.8	65.8	65.8	65.8
≥ 18000	19.4	37.4	40.7	50.3	56.1	60.0	63.2	63.9	63.9	65.8	65.8	65.8	65.8	65.8	65.8
≥ 16000	19.4	37.4	40.7	50.3	56.1	60.0	63.2	63.9	63.9	65.8	65.8	65.8	65.8	65.8	65.8
≥ 14000	19.4	37.4	41.3	51.0	56.8	60.7	63.9	64.5	64.5	66.5	66.5	66.5	66.5	66.5	66.5
≥ 12000	19.4	37.4	41.3	51.0	56.8	61.3	64.5	65.2	65.2	67.1	67.1	67.1	67.1	67.1	67.1
≥ 10000	20.7	41.3	45.8	55.5	61.9	66.5	70.3	71.0	71.0	72.9	72.9	72.9	72.9	72.9	72.9
≥ 9000	20.7	41.3	45.8	55.5	61.9	66.5	70.3	71.0	71.0	72.9	72.9	72.9	72.9	72.9	72.9
≥ 8000	21.3	44.5	49.0	59.4	67.1	71.6	75.5	76.8	78.7	78.7	78.7	78.7	78.7	78.7	78.7
≥ 7000	21.3	45.2	49.7	60.0	67.7	72.3	76.1	77.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 6000	21.3	45.8	50.3	60.7	68.4	72.9	76.8	78.1	80.0	80.0	80.0	80.0	80.0	80.0	80.0
≥ 5000	21.3	47.7	52.3	62.6	70.3	74.8	78.7	80.0	81.9	81.9	81.9	81.9	81.9	81.9	81.9
≥ 4500	21.9	48.4	52.9	63.9	72.3	76.8	80.7	81.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
≥ 4000	22.6	49.7	54.2	65.2	73.6	79.4	83.2	84.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5
≥ 3500	22.6	50.3	54.8	66.5	74.8	80.7	84.5	85.8	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 3000	22.6	51.6	56.1	67.7	76.1	81.9	86.5	87.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7
≥ 2500	22.6	51.6	56.1	68.4	76.8	83.2	87.7	89.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0
≥ 2000	22.6	51.6	56.8	69.0	77.4	83.9	89.0	90.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3
≥ 1800	22.6	51.6	56.8	69.0	77.4	83.9	89.0	90.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3
≥ 1500	23.2	52.9	58.1	71.0	79.4	85.8	91.0	92.9	94.8	94.8	94.8	94.8	94.8	94.8	94.8
≥ 1200	23.2	52.9	58.1	71.0	79.4	85.8	91.0	92.9	94.8	94.8	94.8	94.8	94.8	94.8	94.8
≥ 1000	23.2	53.6	58.7	71.6	80.0	86.5	91.6	93.6	95.5	95.5	95.5	95.5	95.5	95.5	95.5
≥ 900	23.2	53.6	58.7	71.6	80.0	86.5	91.6	93.6	95.5	95.5	95.5	95.5	95.5	95.5	95.5
≥ 800	23.2	53.6	58.7	71.6	80.0	86.5	91.6	93.6	95.5	95.5	95.5	95.5	95.5	95.5	95.5
≥ 700	23.2	53.6	58.7	71.6	80.0	86.5	91.6	93.6	95.5	95.5	95.5	95.5	95.5	95.5	95.5
≥ 600	23.2	53.6	58.7	71.6	80.0	86.5	91.6	93.6	95.5	95.5	95.5	95.5	95.5	95.5	95.5
≥ 500	23.2	53.6	58.7	71.6	80.0	86.5	91.6	93.6	95.5	95.5	95.5	95.5	95.5	95.5	95.5
≥ 400	23.2	53.6	58.7	71.6	80.0	86.5	91.6	93.6	95.5	95.5	95.5	95.5	95.5	95.5	95.5
≥ 300	23.2	53.6	58.7	71.6	80.0	86.5	91.6	93.6	95.5	95.5	95.5	95.5	95.5	95.5	95.5
≥ 200	23.2	53.6	58.7	71.6	80.0	86.5	91.6	93.6	95.5	95.5	95.5	95.5	95.5	95.5	95.5
≥ 100	23.2	53.6	58.7	71.6	80.0	86.5	91.6	93.6	95.5	95.5	95.5	95.5	95.5	95.5	95.5
≥ 0	23.2	53.6	58.7	71.6	80.0	86.5	91.6	93.6	95.5	95.5	95.5	95.5	95.5	95.5	95.5

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

AUG  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

04  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)														
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ ⅓	≥ ⅕	≥ 0
NO CEILING	18.1	29.0	32.3	34.8	36.8	37.4	42.6	44.5	45.2	46.5	47.1	47.1	47.1	47.1	47.1
≥ 20000	21.3	33.6	36.8	40.7	43.2	44.5	50.3	52.3	52.9	54.8	56.1	56.1	56.1	56.1	56.1
≥ 18000	21.3	33.6	36.8	40.7	43.2	44.5	50.3	52.3	52.9	54.8	56.1	56.1	56.1	56.1	56.1
≥ 16000	21.3	33.6	36.8	40.7	43.2	44.5	50.3	52.3	52.9	54.8	56.1	56.1	56.1	56.1	56.1
≥ 14000	21.3	34.2	37.4	41.3	43.9	45.2	51.0	52.9	53.6	55.5	56.8	56.8	56.8	56.8	56.8
≥ 12000	21.3	34.2	37.4	41.3	43.9	45.2	51.0	53.6	54.2	56.1	57.4	57.4	57.4	57.4	57.4
≥ 10000	21.3	36.1	40.0	44.5	48.4	50.3	57.4	59.4	60.0	61.9	63.2	63.2	63.2	63.2	63.2
≥ 9000	21.3	36.1	40.0	44.5	48.4	50.3	57.4	59.4	60.0	61.9	63.2	63.2	63.2	63.2	63.2
≥ 8000	21.9	38.7	43.2	47.7	51.6	53.6	60.7	63.2	63.9	66.5	67.7	67.7	67.7	67.7	67.7
≥ 7000	21.9	38.7	43.2	47.7	51.6	53.6	60.7	63.2	63.9	66.5	67.7	67.7	67.7	67.7	67.7
≥ 6000	21.9	38.7	43.2	47.7	52.3	54.2	61.3	63.9	64.5	67.1	68.4	68.4	68.4	68.4	68.4
≥ 5000	21.9	39.4	43.9	49.0	53.6	55.5	63.2	65.8	66.5	69.0	70.3	70.3	70.3	70.3	70.3
≥ 4500	22.6	40.0	45.2	51.0	55.5	57.4	65.2	67.7	68.4	71.0	72.3	72.3	72.3	72.3	72.3
≥ 4000	22.6	41.3	46.5	52.3	57.4	59.4	68.4	71.0	71.6	74.8	76.1	76.1	76.1	76.1	76.1
≥ 3500	22.6	41.3	47.1	52.9	58.1	60.0	69.0	72.3	72.9	76.1	77.4	77.4	77.4	77.4	77.4
≥ 3000	23.2	43.2	50.3	56.8	62.6	64.5	73.6	76.8	77.4	80.7	81.9	81.9	81.9	81.9	81.9
≥ 2500	23.9	43.9	51.0	57.4	63.2	65.2	74.2	78.1	78.7	81.9	83.2	83.2	83.2	83.2	83.2
≥ 2000	23.9	43.9	51.6	58.7	64.5	66.5	75.5	79.4	80.0	83.9	85.2	85.2	85.2	85.2	85.2
≥ 1800	23.9	43.9	51.6	58.7	64.5	66.5	75.5	79.4	80.0	83.9	85.2	85.2	85.2	85.2	85.2
≥ 1500	23.9	43.9	51.6	58.7	64.5	66.5	75.5	79.4	80.0	83.9	85.2	85.2	85.2	85.2	85.2
≥ 1200	24.5	45.2	52.9	60.0	65.8	67.7	78.1	82.6	83.2	87.1	88.4	88.4	88.4	88.4	88.4
≥ 1000	24.5	45.2	53.6	60.7	67.1	69.0	79.4	83.9	84.5	88.4	89.7	89.7	89.7	89.7	89.7
≥ 900	24.5	45.2	53.6	60.7	67.1	69.0	79.4	83.9	84.5	88.4	89.7	89.7	89.7	89.7	89.7
≥ 800	24.5	45.2	53.6	60.7	67.1	69.0	79.4	83.9	84.5	88.4	89.7	89.7	89.7	89.7	89.7
≥ 700	24.5	45.2	53.6	60.7	67.1	69.0	79.4	83.9	84.5	88.4	89.7	89.7	89.7	89.7	89.7
≥ 600	24.5	45.2	53.6	60.7	67.1	69.0	79.4	83.9	84.5	88.4	89.7	89.7	89.7	89.7	89.7
≥ 500	24.5	45.2	53.6	60.7	67.1	69.0	79.4	83.9	84.5	88.4	89.7	89.7	89.7	89.7	89.7
≥ 400	24.5	45.2	53.6	60.7	67.1	69.0	79.4	83.9	84.5	88.4	89.7	89.7	89.7	89.7	89.7
≥ 300	24.5	45.2	53.6	60.7	67.7	71.0	81.3	86.5	87.1	91.6	92.9	92.9	92.9	92.9	92.9
≥ 200	24.5	45.2	53.6	60.7	67.7	71.0	81.3	86.5	87.1	91.6	92.9	92.9	92.9	92.9	92.9
≥ 100	24.5	45.2	53.6	60.7	67.7	71.0	81.3	86.5	87.1	91.6	92.9	92.9	92.9	92.9	92.9
≥ 0	24.5	45.2	53.6	60.7	67.7	71.0	81.3	86.5	87.1	91.6	92.9	92.9	92.9	92.9	92.9

TOTAL NUMBER OF OBSERVATIONS

155

## CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

AUG

STATION NAME

YEARS

MONTH

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)07  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	13.6	27.1	29.7	36.1	39.4	41.3	45.8	49.0	49.0	49.7	51.0	51.0	51.0	51.6
≥ 20000	13.6	27.7	31.0	38.1	41.3	43.9	50.3	54.2	54.8	56.1	58.1	58.1	58.1	58.7
≥ 18000	13.6	27.7	31.0	38.1	41.3	43.9	50.3	54.2	54.8	56.1	58.1	58.1	58.1	58.7
≥ 16000	13.6	27.7	31.0	38.1	41.3	43.9	50.3	54.2	54.8	56.1	58.1	58.1	58.1	58.7
≥ 14000	13.6	27.7	31.0	38.1	41.3	43.9	50.3	54.2	54.8	56.1	58.1	58.1	58.1	58.7
≥ 12000	14.2	29.0	32.3	40.0	43.9	46.5	52.9	57.4	58.1	59.4	61.3	61.3	61.3	61.9
≥ 10000	14.8	31.0	34.2	41.9	46.5	49.0	56.8	61.9	62.6	63.9	65.8	65.8	65.8	66.5
≥ 9000	14.8	31.0	34.8	42.6	47.1	49.7	57.4	62.6	63.2	64.5	66.5	66.5	66.5	67.1
≥ 8000	14.8	32.3	36.1	43.9	49.7	52.9	61.3	66.5	67.1	68.4	71.0	71.0	71.0	71.6
≥ 7000	14.8	32.3	36.1	43.9	49.7	52.9	61.3	66.5	67.1	68.4	71.0	71.0	71.0	71.6
≥ 6000	14.8	32.9	36.8	44.5	50.3	53.6	61.9	67.1	67.7	69.0	71.6	71.6	71.6	72.3
≥ 5000	14.8	32.9	36.8	45.2	51.0	54.2	62.6	67.7	68.4	70.3	72.9	72.9	72.9	73.6
≥ 4500	14.8	32.9	36.8	45.2	51.6	54.8	63.2	68.4	69.0	71.0	73.6	73.6	73.6	74.2
≥ 4000	14.8	33.6	37.4	47.1	53.6	56.8	65.2	70.3	71.0	72.9	75.5	75.5	75.5	76.1
≥ 3500	14.8	33.6	37.4	47.1	53.6	56.8	65.8	71.0	71.6	73.6	76.1	76.1	76.1	76.8
≥ 3000	15.5	34.2	38.1	47.7	54.2	57.4	66.5	71.6	72.3	74.2	76.8	76.8	76.8	77.4
≥ 2500	15.5	34.2	38.1	47.7	54.2	58.1	67.7	72.9	73.6	76.1	78.7	78.7	78.7	79.4
≥ 2000	15.5	34.2	38.7	48.4	55.5	60.0	69.7	74.8	75.5	78.1	80.7	80.7	80.7	81.3
≥ 1800	15.5	34.2	38.7	48.4	55.5	60.0	69.7	74.8	75.5	78.1	80.7	80.7	80.7	81.3
≥ 1500	15.5	34.2	38.7	48.4	56.1	60.7	71.0	76.1	76.8	80.0	82.6	82.6	82.6	83.2
≥ 1200	15.5	34.2	38.7	48.4	56.8	61.3	71.6	77.4	78.1	81.3	83.9	83.9	83.9	84.5
≥ 1000	15.5	34.8	39.4	49.0	57.4	62.6	73.6	79.4	80.0	83.2	86.5	86.5	86.5	87.1
≥ 900	15.5	34.8	39.4	49.0	57.4	62.6	73.6	79.4	80.0	83.2	86.5	86.5	86.5	87.1
≥ 800	15.5	34.8	40.0	49.7	58.1	63.2	74.8	81.3	81.9	85.2	88.4	88.4	88.4	89.0
≥ 700	15.5	34.8	40.0	50.3	58.7	63.9	76.1	82.6	83.2	86.5	89.7	89.7	89.7	90.3
≥ 600	15.5	34.8	40.0	50.3	58.7	63.9	76.1	82.6	83.2	86.5	89.7	89.7	89.7	90.3
≥ 500	15.5	34.8	40.0	50.3	58.7	63.9	76.8	83.2	83.9	87.1	91.6	91.6	91.6	92.3
≥ 400	15.5	34.8	40.0	50.3	58.7	63.9	76.8	83.2	83.9	87.7	92.9	92.9	92.9	93.6
≥ 300	15.5	34.8	40.0	50.3	58.7	64.5	77.4	83.9	84.5	89.0	94.2	94.2	94.2	94.8
≥ 200	15.5	34.8	40.0	50.3	58.7	64.5	77.4	84.5	85.2	89.7	94.8	94.8	94.8	95.4
≥ 100	15.5	34.8	40.0	50.3	58.7	64.5	77.4	84.5	85.2	89.7	94.8	94.8	94.8	95.4
≥ 0	15.5	34.8	40.0	50.3	58.7	64.5	77.4	84.5	85.2	89.7	94.8	94.8	94.8	95.4

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

AUG  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

10  
HOURS (L S T)

CEILING (FEET)	VISIBILITY (STATUTE MILES)											
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½
NO CEILING	14.2	32.3	37.4	44.5	49.7	51.6	51.6	51.6	51.6	51.6	51.6	51.6
≥ 20000	14.8	37.4	43.2	50.3	57.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4
≥ 18000	14.8	37.4	43.2	50.3	57.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4
≥ 16000	14.8	37.4	43.2	50.3	57.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4
≥ 14000	14.8	37.4	43.2	50.3	57.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4
≥ 12000	14.8	38.1	44.5	51.6	58.7	61.3	61.3	61.3	61.3	61.3	61.3	61.3
≥ 10000	16.8	40.7	47.7	55.5	62.6	65.8	66.5	66.5	66.5	66.5	66.5	66.5
≥ 9000	16.8	40.7	47.7	55.5	62.6	65.8	66.5	66.5	66.5	66.5	66.5	66.5
≥ 8000	16.8	42.6	50.3	58.1	65.2	69.0	70.3	70.3	70.3	70.3	70.3	70.3
≥ 7000	16.8	43.2	51.0	58.7	65.8	70.3	71.6	71.6	71.6	71.6	71.6	71.6
≥ 6000	16.8	43.9	51.6	60.0	67.1	71.6	72.9	72.9	72.9	72.9	72.9	72.9
≥ 5000	16.8	43.9	51.6	60.0	67.1	71.6	73.6	73.6	73.6	73.6	73.6	73.6
≥ 4500	16.8	43.9	51.6	60.0	67.1	72.3	74.2	74.2	74.2	74.2	74.2	74.2
≥ 4000	16.8	44.5	52.9	61.9	69.0	73.6	75.5	75.5	75.5	75.5	76.1	76.1
≥ 3500	16.8	44.5	52.9	61.9	69.0	74.2	76.8	76.8	76.8	76.8	77.4	77.4
≥ 3000	16.8	45.8	54.2	64.5	72.9	78.1	80.7	81.3	81.3	81.3	81.9	81.9
≥ 2500	16.8	45.8	54.2	64.5	73.6	80.0	82.6	83.2	83.2	83.2	83.9	83.9
≥ 2000	16.8	47.1	56.8	68.4	78.1	85.2	87.7	88.4	88.4	88.4	89.0	89.0
≥ 1800	16.8	47.1	56.8	68.4	78.1	85.2	87.7	88.4	88.4	88.4	89.0	89.0
≥ 1500	17.4	47.7	57.4	69.0	78.7	86.5	89.0	89.7	89.7	89.7	90.3	90.3
≥ 1200	17.4	48.4	58.7	70.3	80.0	87.7	90.3	91.0	91.0	91.0	91.6	91.6
≥ 1000	17.4	48.4	58.7	71.0	81.3	89.7	92.3	93.6	93.6	93.6	94.2	94.2
≥ 900	17.4	48.4	58.7	71.0	81.3	89.7	92.3	93.6	93.6	93.6	94.2	94.2
≥ 800	17.4	48.4	60.0	72.3	82.6	91.0	93.6	94.8	94.8	94.8	96.1	96.1
≥ 700	17.4	48.4	60.0	72.3	82.6	91.0	93.6	94.8	94.8	94.8	96.1	96.1
≥ 600	17.4	48.4	60.0	72.3	82.6	91.0	94.8	96.1	96.1	96.1	98.1	98.1
≥ 500	17.4	48.4	60.0	72.3	82.6	91.0	94.8	96.1	96.1	96.1	98.1	98.1
≥ 400	17.4	48.4	60.0	72.3	82.6	91.0	94.8	96.1	96.1	96.1	98.1	98.1
≥ 300	17.4	48.4	60.0	72.3	82.6	91.0	94.8	96.1	96.1	96.1	98.1	98.1
≥ 200	17.4	48.4	60.0	72.3	82.6	91.0	94.8	96.1	96.1	96.1	98.1	98.1
≥ 100	17.4	48.4	60.0	72.3	82.6	91.0	94.8	96.1	96.1	96.1	98.1	98.1
≥ 0	17.4	48.4	60.0	72.3	82.6	91.0	94.8	96.1	96.1	96.1	98.1	98.1

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

AUG  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

13  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	13.6	27.1	36.8	42.6	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2
≥ 20000	14.2	31.6	41.3	48.4	52.3	52.3	52.9	52.9	52.9	52.9	52.9	52.9	52.9
18000	14.2	31.6	41.3	48.4	52.3	52.3	52.9	52.9	52.9	52.9	52.9	52.9	52.9
16000	14.2	31.6	41.3	48.4	52.3	52.3	52.9	52.9	52.9	52.9	52.9	52.9	52.9
14000	14.2	31.6	41.3	48.4	52.3	52.3	52.9	52.9	52.9	52.9	52.9	52.9	52.9
12000	14.2	34.2	44.5	51.6	56.1	56.1	56.8	56.8	56.8	56.8	56.8	56.8	56.8
10000	16.1	36.1	48.4	56.8	63.2	63.9	64.5	64.5	64.5	64.5	64.5	64.5	64.5
9000	16.1	36.1	49.0	57.4	63.9	64.5	65.2	65.2	65.2	65.2	65.2	65.2	65.2
8000	16.1	38.1	51.6	61.3	68.4	69.0	69.7	69.7	69.7	69.7	69.7	69.7	69.7
7000	16.1	38.1	51.6	61.3	68.4	69.0	69.7	69.7	69.7	69.7	69.7	69.7	69.7
6000	16.1	38.1	51.6	61.3	68.4	69.0	69.7	69.7	69.7	69.7	69.7	69.7	69.7
5000	16.8	40.0	53.6	63.2	70.3	71.6	72.3	72.3	72.3	72.3	72.3	72.3	72.3
4500	16.8	40.7	54.2	64.5	71.6	72.9	73.6	73.6	73.6	73.6	73.6	73.6	73.6
4000	16.8	41.9	55.5	65.8	72.9	74.2	74.8	74.8	74.8	74.8	74.8	74.8	74.8
3500	16.8	44.5	60.7	71.6	79.4	80.7	81.3	81.3	81.3	81.3	81.3	81.3	81.3
3000	17.4	47.1	65.2	76.1	83.9	85.8	86.5	86.5	86.5	86.5	86.5	86.5	86.5
2500	17.4	47.1	65.2	76.1	85.2	87.1	87.7	87.7	87.7	87.7	87.7	87.7	87.7
2000	17.4	48.4	67.1	78.7	88.4	90.3	91.0	91.0	91.0	91.0	91.0	91.0	91.0
1800	17.4	48.4	67.1	78.7	88.4	90.3	91.0	91.0	91.0	91.0	91.0	91.0	91.0
1500	17.4	48.4	68.4	80.7	91.0	92.9	94.2	94.2	94.2	94.2	94.2	94.2	94.2
1200	17.4	48.4	68.4	80.7	91.0	93.6	94.8	94.8	94.8	94.8	94.8	94.8	94.8
1000	17.4	48.4	68.4	80.7	92.3	94.2	95.5	96.1	96.1	96.1	96.1	96.1	96.1
900	17.4	48.4	68.4	80.7	92.3	94.2	95.5	96.1	96.1	96.1	96.1	96.1	96.1
800	17.4	48.4	68.4	80.7	92.3	94.2	95.5	96.1	96.1	96.1	96.1	96.1	96.1
700	17.4	48.4	68.4	80.7	92.3	94.2	95.5	96.1	96.1	96.1	96.1	96.1	96.1
600	17.4	48.4	69.0	81.3	92.9	94.8	96.8	97.4	97.4	97.4	97.4	97.4	97.4
500	17.4	48.4	69.0	81.3	93.6	95.5	98.1	98.7	98.7	98.7	98.7	98.7	98.7
400	17.4	48.4	69.0	81.3	93.6	95.5	98.1	98.7	98.7	98.7	98.7	98.7	98.7
300	17.4	48.4	69.0	81.3	93.6	95.5	98.1	98.7	98.7	98.7	98.7	98.7	98.7
200	17.4	48.4	69.0	81.3	93.6	95.5	98.1	98.7	98.7	98.7	98.7	98.7	98.7
100	17.4	48.4	69.0	81.3	93.6	95.5	98.1	98.7	98.7	98.7	98.7	98.7	98.7
0	17.4	48.4	69.0	81.3	93.6	95.5	98.1	98.7	98.7	98.7	98.7	98.7	98.7

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

AUG

STATION NAME

YEARS

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

16

HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)											
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½
NO CEILING	12.3	31.0	37.4	44.5	49.7	50.3	50.3	50.3	50.3	50.3	50.3	50.3
≥ 20000	14.2	37.4	44.5	52.9	59.4	60.7	60.7	60.7	60.7	60.7	60.7	60.7
≥ 18000	14.2	37.4	44.5	52.9	59.4	60.7	60.7	60.7	60.7	60.7	60.7	60.7
≥ 16000	14.2	37.4	44.5	52.9	59.4	60.7	60.7	60.7	60.7	60.7	60.7	60.7
≥ 14000	14.2	37.4	44.5	53.6	60.7	61.9	61.9	61.9	61.9	61.9	61.9	61.9
≥ 12000	14.2	38.7	46.5	56.1	63.2	64.5	64.5	64.5	64.5	64.5	64.5	64.5
≥ 10000	16.1	41.9	49.7	60.7	69.7	71.0	71.0	71.0	71.0	71.0	71.0	71.0
≥ 9000	16.1	41.9	49.7	60.7	69.7	71.0	71.0	71.0	71.0	71.0	71.0	71.0
≥ 8000	16.1	43.9	52.9	64.5	74.2	75.5	75.5	75.5	75.5	75.5	75.5	75.5
≥ 7000	16.1	43.9	52.9	64.5	74.2	75.5	75.5	75.5	75.5	75.5	75.5	75.5
≥ 6000	16.1	43.9	52.9	64.5	74.2	75.5	75.5	75.5	75.5	75.5	75.5	75.5
≥ 5000	16.8	46.5	56.1	67.7	78.1	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 4500	16.8	46.5	56.1	67.7	78.1	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 4000	16.8	47.1	58.1	69.7	80.7	82.6	82.6	82.6	82.6	82.6	82.6	82.6
≥ 3500	16.8	47.7	60.0	71.6	82.6	84.5	84.5	84.5	84.5	84.5	84.5	84.5
≥ 3000	16.8	48.4	60.7	73.6	84.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5
≥ 2500	16.8	49.0	61.3	74.2	85.8	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 2000	16.8	50.3	62.6	76.1	88.4	90.3	90.3	90.3	90.3	90.3	90.3	90.3
≥ 1800	16.8	50.3	62.6	76.1	88.4	90.3	90.3	90.3	90.3	90.3	90.3	90.3
≥ 1500	16.8	50.3	63.2	78.1	91.0	92.9	92.9	92.9	92.9	92.9	92.9	92.9
≥ 1200	16.8	50.3	63.2	78.1	91.0	92.9	92.9	92.9	92.9	92.9	92.9	92.9
≥ 1000	16.8	50.3	63.2	78.7	91.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 900	16.8	50.3	63.2	78.7	91.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 800	16.8	50.3	63.2	78.7	91.6	94.2	94.2	94.2	94.2	94.2	94.2	94.2
≥ 700	16.8	50.3	63.2	78.7	91.6	94.2	94.2	94.2	94.2	94.2	94.2	94.2
≥ 600	16.8	51.0	63.9	79.4	92.9	95.5	95.5	95.5	95.5	95.5	95.5	95.5
≥ 500	16.8	51.0	63.9	79.4	92.9	95.5	95.5	95.5	95.5	95.5	95.5	95.5
≥ 400	16.8	51.0	63.9	79.4	93.6	96.1	96.1	96.1	96.1	96.1	96.1	96.1
≥ 300	16.8	51.0	63.9	79.4	93.6	96.1	96.1	96.1	96.1	96.1	96.1	96.1
≥ 200	16.8	51.0	63.9	79.4	93.6	96.1	96.1	96.1	96.1	96.1	96.1	96.1
≥ 100	16.8	51.0	63.9	79.4	93.6	96.1	96.1	96.1	96.1	96.1	96.1	96.1
0	16.8	51.0	63.9	79.4	93.6	96.1	96.1	96.1	96.1	96.1	96.1	96.1

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

AUG  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

19  
YEARS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	12.9	32.3	36.8	47.1	49.7	50.3	51.0	51.0	51.6	51.6	51.6	51.6	51.6	51.6
≥ 20000	13.6	35.5	40.7	51.6	56.1	56.8	57.4	57.4	58.1	58.1	58.1	58.1	58.1	58.1
≥ 18000	13.6	35.5	40.7	51.6	56.1	56.8	57.4	57.4	58.1	58.1	58.1	58.1	58.1	58.1
≥ 16000	13.6	35.5	40.7	51.6	56.1	56.8	57.4	57.4	58.1	58.1	58.1	58.1	58.1	58.1
≥ 14000	13.6	36.1	41.3	52.3	56.8	57.4	58.1	58.1	58.7	58.7	58.7	58.7	58.7	58.7
≥ 12000	14.2	36.8	41.9	53.6	58.1	58.7	59.4	59.4	60.0	60.0	60.0	60.0	60.0	60.0
≥ 10000	15.5	40.0	47.1	60.7	65.8	66.5	67.7	67.7	68.4	68.4	68.4	68.4	68.4	68.4
≥ 9000	15.5	40.0	47.1	60.7	65.8	66.5	67.7	67.7	68.4	68.4	68.4	68.4	68.4	68.4
≥ 8000	15.5	43.2	51.6	65.8	71.0	72.9	74.2	74.2	74.8	74.8	74.8	74.8	74.8	74.8
≥ 7000	16.1	43.9	52.3	67.1	72.3	74.2	75.5	75.5	76.1	76.1	76.1	76.1	76.1	76.1
≥ 6000	16.1	43.9	52.3	68.4	73.6	76.8	78.1	78.1	78.7	78.7	78.7	78.7	78.7	78.7
≥ 5000	16.1	44.5	53.6	69.0	75.5	80.0	81.3	81.3	81.9	81.9	81.9	81.9	81.9	81.9
≥ 4500	16.1	44.5	54.2	70.3	77.4	81.9	83.2	83.2	83.9	84.5	84.5	84.5	84.5	84.5
≥ 4000	16.1	45.2	54.8	71.0	78.7	83.2	85.2	85.2	85.8	86.5	86.5	86.5	86.5	86.5
≥ 3500	16.1	45.8	55.5	71.6	80.0	84.5	86.5	86.5	87.1	87.7	87.7	87.7	87.7	87.7
≥ 3000	16.1	47.1	58.7	75.5	83.9	89.0	91.0	92.3	92.9	92.9	92.9	92.9	92.9	92.9
≥ 2500	16.1	47.1	59.4	76.1	84.5	89.7	91.6	92.9	93.6	93.6	93.6	93.6	93.6	93.6
≥ 2000	16.1	47.7	60.0	76.8	85.2	90.3	92.3	93.6	94.2	94.2	94.2	94.2	94.2	94.2
≥ 1800	16.1	47.7	60.0	76.8	85.2	90.3	92.3	93.6	94.2	94.2	94.2	94.2	94.2	94.2
≥ 1500	16.1	47.7	60.7	77.4	85.8	91.0	92.9	94.2	94.8	94.8	94.8	94.8	94.8	94.8
≥ 1200	16.1	47.7	60.7	77.4	85.8	91.0	93.6	94.8	95.5	95.5	95.5	95.5	95.5	95.5
≥ 1000	16.1	47.7	60.7	77.4	85.8	91.0	93.6	96.1	96.8	96.8	96.8	96.8	96.8	96.8
≥ 900	16.1	47.7	60.7	77.4	85.8	91.0	93.6	96.1	96.8	96.8	96.8	96.8	96.8	96.8
≥ 800	16.1	47.7	60.7	77.4	85.8	91.0	93.6	96.1	96.8	96.8	96.8	96.8	96.8	96.8
≥ 700	16.1	47.7	60.7	78.1	86.5	91.6	94.2	96.8	97.4	97.4	97.4	97.4	97.4	97.4
≥ 600	16.1	48.4	61.3	78.7	87.1	92.9	95.5	98.1	98.7	98.7	98.7	98.7	98.7	98.7
≥ 500	16.1	48.4	61.3	78.7	87.1	92.9	95.5	98.1	98.7	98.7	98.7	98.7	98.7	98.7
≥ 400	16.1	48.4	61.3	78.7	87.1	93.6	96.1	98.7	99.4	99.4	99.4	99.4	99.4	99.4
≥ 300	16.1	48.4	61.3	78.7	88.4	94.2	96.8	99.4	100.0	100.0	100.0	100.0	100.0	100.0
≥ 200	16.1	48.4	61.3	78.7	88.4	94.2	96.8	99.4	100.0	100.0	100.0	100.0	100.0	100.0
≥ 100	16.1	48.4	61.3	78.7	88.4	94.2	96.8	99.4	100.0	100.0	100.0	100.0	100.0	100.0
≥ 0	16.1	48.4	61.3	78.7	88.4	94.2	96.8	99.4	100.0	100.0	100.0	100.0	100.0	100.0

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

AUG  
MONTH

22  
HOURS (L.S.T.)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	18.1	34.8	40.7	45.8	49.7	54.2	54.8	54.8	54.8	54.8	55.5	55.5	56.1	56.1
≥ 20000	19.4	38.1	44.5	49.7	53.6	58.7	58.7	60.0	60.0	60.0	60.7	60.7	61.3	61.3
≥ 18000	19.4	38.1	44.5	49.7	53.6	58.7	58.7	60.0	60.0	60.0	60.7	60.7	61.3	61.3
≥ 16000	19.4	38.1	44.5	49.7	53.6	58.7	58.7	60.0	60.0	60.0	60.7	60.7	61.3	61.3
≥ 14000	20.0	39.4	45.8	51.0	54.8	60.0	60.0	61.3	61.3	61.3	61.9	61.9	62.6	62.6
≥ 12000	20.0	39.4	45.8	51.0	54.8	60.0	60.0	61.3	61.3	61.3	61.9	61.9	62.6	62.6
≥ 10000	25.2	47.7	56.1	61.9	66.5	71.6	71.6	72.9	72.9	72.9	73.6	73.6	74.2	74.2
≥ 9000	25.2	47.7	56.1	61.9	66.5	71.6	71.6	72.9	72.9	72.9	73.6	73.6	74.2	74.2
≥ 8000	27.7	52.9	61.3	67.1	71.6	76.8	76.8	78.1	78.1	78.1	78.7	78.7	79.4	79.4
≥ 7000	28.4	53.6	61.9	67.7	72.9	78.1	78.1	79.4	79.4	79.4	80.0	80.0	80.7	80.7
≥ 6000	28.4	54.2	62.6	68.4	73.6	78.7	78.7	80.0	80.0	80.0	80.7	80.7	81.3	81.3
≥ 5000	28.4	54.8	63.2	69.0	74.8	80.0	80.0	81.9	81.9	81.9	82.6	82.6	83.2	83.2
≥ 4500	28.4	54.8	63.2	69.7	75.5	80.7	81.3	82.6	82.6	82.6	83.2	83.2	83.9	83.9
≥ 4000	28.4	55.5	65.2	71.6	77.4	82.6	83.2	84.5	84.5	84.5	85.2	85.2	85.8	85.8
≥ 3500	28.4	56.1	65.8	72.9	78.7	83.9	84.5	85.8	85.8	85.8	86.5	86.5	87.1	87.1
≥ 3000	29.7	58.7	68.4	75.5	82.6	87.7	88.4	89.7	89.7	90.3	91.0	91.0	91.6	91.6
≥ 2500	29.7	59.4	69.0	76.1	83.2	88.4	89.0	90.3	90.3	91.0	91.6	91.6	92.3	92.3
≥ 2000	29.7	59.4	69.7	77.4	84.5	89.7	90.3	92.3	92.3	92.9	93.6	93.6	94.2	94.2
≥ 1800	29.7	59.4	69.7	77.4	84.5	89.7	90.3	92.3	92.3	92.9	93.6	93.6	94.2	94.2
≥ 1500	29.7	60.0	70.3	78.1	85.8	91.0	91.6	93.6	93.6	94.2	94.8	94.8	95.5	95.5
≥ 1200	29.7	60.0	70.3	78.1	85.8	91.0	91.6	93.6	93.6	94.2	94.8	94.8	95.5	95.5
≥ 1000	29.7	60.0	70.3	78.1	85.8	91.6	92.9	94.8	94.8	95.5	96.1	96.1	96.8	96.8
≥ 900	29.7	60.0	70.3	78.1	85.8	91.6	92.9	94.8	94.8	95.5	96.1	96.1	96.8	96.8
≥ 800	29.7	60.0	70.3	78.7	86.5	92.3	93.6	95.5	95.5	96.1	96.8	96.8	97.4	97.4
≥ 700	29.7	60.0	70.3	78.7	86.5	92.3	93.6	95.5	95.5	96.1	96.8	96.8	97.4	97.4
≥ 600	29.7	60.0	70.3	78.7	86.5	92.9	94.2	96.1	96.1	96.8	97.4	97.4	98.1	98.1
≥ 500	29.7	60.0	70.3	78.7	87.7	94.2	95.5	97.4	97.4	98.1	98.7	98.7	99.4	99.4
≥ 400	29.7	60.0	70.3	79.4	87.7	94.2	95.5	97.4	97.4	98.1	98.7	98.7	99.4	99.4
≥ 300	29.7	60.0	70.3	78.7	87.7	94.2	95.5	97.4	97.4	98.1	98.7	98.7	99.4	99.4
≥ 200	29.7	60.0	70.3	78.7	87.7	94.2	95.5	97.4	97.4	98.1	98.7	98.7	99.4	99.4
≥ 100	29.7	60.0	70.3	78.7	87.7	94.2	95.5	97.4	97.4	98.1	98.7	98.7	99.4	99.4
0	29.7	60.0	70.3	78.7	87.7	94.2	95.5	97.4	97.4	98.1	98.7	98.7	99.4	99.4

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

AUG  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

ALL  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	15.2	31.1	36.2	42.8	46.6	48.3	49.8	50.7	50.8	51.2	51.5	51.5	51.6	51.8
≥ 20000	16.3	34.8	40.3	47.7	52.4	54.5	56.6	57.6	57.8	58.5	59.0	59.0	59.0	59.2
≥ 18000	16.3	34.8	40.3	47.7	52.4	54.5	56.6	57.6	57.8	58.5	59.0	59.0	59.0	59.2
≥ 16000	16.3	34.8	40.3	47.7	52.4	54.5	56.6	57.6	57.8	58.5	59.0	59.0	59.0	59.2
≥ 14000	16.4	35.2	40.7	48.2	53.0	55.1	57.2	58.2	58.4	59.0	59.5	59.5	59.6	59.8
≥ 12000	16.5	36.0	41.8	49.5	54.4	56.7	58.9	59.9	60.2	60.8	61.3	61.3	61.4	61.5
≥ 10000	18.3	39.4	46.1	54.7	60.6	63.1	65.7	66.9	67.1	67.7	68.2	68.2	68.3	68.5
≥ 9000	18.3	39.4	46.3	54.8	60.7	63.2	65.9	67.0	67.3	67.9	68.4	68.4	68.5	68.6
≥ 8000	18.8	42.0	49.5	58.5	64.8	67.7	70.5	71.8	72.0	72.7	73.3	73.3	73.4	73.6
≥ 7000	19.0	42.3	49.8	58.9	65.3	68.2	71.1	72.3	72.6	73.3	73.9	73.9	74.0	74.1
≥ 6000	19.0	42.7	50.2	59.4	66.0	69.0	71.9	73.2	73.4	74.1	74.7	74.7	74.8	74.9
≥ 5000	19.1	43.7	51.4	60.7	67.6	70.9	74.0	75.2	75.5	76.3	76.9	76.9	76.9	77.1
≥ 4500	19.3	44.0	51.8	61.6	68.7	72.0	75.1	76.5	76.7	77.5	78.1	78.1	78.2	78.3
≥ 4000	19.4	44.8	53.1	63.1	70.4	74.0	77.3	80.6	78.9	79.8	80.4	80.4	80.5	80.7
≥ 3500	19.4	45.5	54.3	64.5	72.1	75.7	79.1	80.9	80.9	81.8	82.4	82.4	82.5	82.7
≥ 3000	19.8	47.0	56.5	67.2	75.1	78.9	82.4	84.1	84.4	85.3	86.0	86.0	86.1	86.3
≥ 2500	19.8	47.3	56.8	67.6	75.8	79.9	83.6	85.3	85.6	86.6	87.3	87.3	87.3	87.6
≥ 2000	19.8	47.8	57.9	69.2	77.7	82.0	85.7	87.6	87.8	89.0	89.6	89.6	89.7	89.9
≥ 1800	19.8	47.8	57.9	69.2	77.7	82.0	85.7	87.6	87.8	89.0	89.6	89.6	89.7	89.9
≥ 1500	20.0	48.2	58.6	70.2	79.0	83.4	87.5	89.4	89.7	90.9	91.5	91.5	91.9	92.1
≥ 1200	20.1	48.4	58.9	70.5	79.5	83.9	88.1	90.2	90.4	91.8	92.4	92.4	92.7	93.0
≥ 1000	20.1	48.6	59.1	70.9	80.2	84.8	89.1	91.5	91.8	93.2	93.9	93.9	94.2	94.5
≥ 900	20.1	48.6	59.1	70.9	80.2	84.8	89.1	91.5	91.8	93.2	93.9	93.9	94.2	94.5
≥ 800	20.1	48.6	59.4	71.2	80.5	85.2	89.7	92.2	92.4	94.0	94.8	94.8	95.1	95.4
≥ 700	20.1	48.6	59.4	71.4	80.7	85.4	90.0	92.5	92.7	94.3	95.1	95.1	95.4	95.7
≥ 600	20.1	48.7	59.6	71.6	81.1	86.0	90.9	93.5	93.7	95.3	96.1	96.1	96.5	96.8
≥ 500	20.1	48.7	59.6	71.7	81.3	86.2	91.3	93.9	94.1	95.7	96.7	96.7	97.2	97.6
≥ 400	20.1	48.7	59.6	71.7	81.5	86.5	91.5	94.1	94.4	96.1	97.1	97.1	97.8	98.1
≥ 300	20.1	48.7	59.6	71.7	81.6	86.7	91.9	94.4	94.7	96.5	97.5	97.5	98.3	98.7
≥ 200	20.1	48.7	59.6	71.7	81.6	86.7	91.9	94.5	94.8	96.5	97.6	97.6	98.6	99.0
≥ 100	20.1	48.7	59.6	71.7	81.6	86.7	91.9	94.5	94.8	96.6	97.8	97.9	99.0	99.5
≥ 0	20.1	48.7	59.6	71.7	81.6	86.7	91.9	94.5	94.8	96.6	97.8	97.9	99.1	99.6

TOTAL NUMBER OF OBSERVATIONS

1240

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

SEP

STATION NAME

YEARS

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

01

NOVEMBER (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	21.3	35.3	41.3	44.0	47.3	47.3	48.7	50.7	50.7	50.7	50.7	50.7	50.7	50.7
≥ 20000	24.7	40.7	46.7	49.3	52.7	52.7	54.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 18000	24.7	40.7	46.7	49.3	52.7	52.7	54.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 16000	24.7	40.7	46.7	49.3	52.7	52.7	54.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 14000	24.7	40.7	46.7	49.3	52.7	52.7	54.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 12000	26.0	42.7	48.7	51.3	54.7	54.7	56.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7
≥ 10000	28.7	46.0	55.3	58.7	62.0	62.0	64.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7
≥ 9000	28.7	46.0	55.3	58.7	62.0	62.0	64.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7
≥ 8000	30.0	47.3	57.3	61.3	64.7	64.7	68.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
≥ 7000	30.0	47.3	57.3	61.3	64.7	64.7	68.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
≥ 6000	30.0	48.0	58.0	62.0	66.0	66.0	69.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3
≥ 5000	30.7	50.0	60.7	64.7	68.7	68.7	72.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0
≥ 4500	30.7	50.7	61.3	65.3	69.3	69.3	72.7	74.7	74.7	74.7	74.7	74.7	74.7	74.7
≥ 4000	30.7	50.7	62.0	66.0	70.0	70.0	73.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3
≥ 3500	31.3	52.0	63.3	67.3	71.3	71.3	74.7	76.7	76.7	76.7	76.7	76.7	76.7	76.7
≥ 3000	32.0	53.3	65.3	70.7	74.7	74.7	78.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
≥ 2500	32.7	54.0	66.0	71.3	75.3	75.3	78.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7
≥ 2000	33.3	55.3	67.3	72.7	76.7	77.3	80.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7
≥ 1800	33.3	55.3	67.3	72.7	76.7	77.3	80.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7
≥ 1500	34.0	56.7	68.7	74.0	78.0	78.7	82.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0
≥ 1200	34.0	56.7	68.7	74.0	78.0	78.7	82.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0
≥ 1000	34.0	57.3	69.3	75.3	80.0	80.7	84.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0
≥ 900	34.0	57.3	69.3	75.3	80.0	80.7	84.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0
≥ 800	34.0	57.3	69.3	75.3	80.0	80.7	84.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0
≥ 700	34.0	57.3	69.3	75.3	80.0	80.7	84.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0
≥ 600	34.0	58.0	70.0	76.0	81.3	82.0	85.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
≥ 500	34.0	58.0	70.0	76.0	81.3	82.0	85.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
≥ 400	34.0	58.0	70.0	76.0	81.3	82.0	85.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
≥ 300	34.0	58.0	70.0	76.0	81.3	82.0	85.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
≥ 200	34.0	58.0	70.0	76.0	81.3	82.0	85.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
≥ 100	34.0	58.0	70.0	76.0	81.3	82.0	85.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
0	34.0	58.0	70.0	76.0	81.3	82.0	85.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3

TOTAL NUMBER OF OBSERVATIONS 150

DIRNAVOCEANMET SMOS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

SEP

STATION

STATION NAME

YEARS

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

04  
HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)														≥ 0
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	
NO CEILING	24.0	35.3	39.3	40.0	44.7	44.7	47.3	48.0	48.0	49.3	49.3	50.0	50.0	50.7	50.7
≥ 20000	26.0	38.7	42.7	43.3	48.0	48.7	51.3	52.0	52.0	54.0	54.0	54.7	54.7	56.0	56.0
≥ 18000	26.0	38.7	42.7	43.3	48.0	48.7	51.3	52.0	52.0	54.0	54.0	54.7	54.7	56.0	56.0
≥ 16000	26.0	38.7	42.7	43.3	48.0	48.7	51.3	52.0	52.0	54.0	54.0	54.7	54.7	56.0	56.0
≥ 14000	26.0	38.7	42.7	43.3	48.0	48.7	51.3	52.0	52.0	54.0	54.0	54.7	54.7	56.0	56.0
≥ 12000	26.7	39.3	43.3	44.0	48.7	49.3	52.0	52.7	52.7	54.7	54.7	55.3	55.3	56.7	56.7
≥ 10000	30.0	43.3	48.7	51.3	56.0	56.7	60.0	60.7	60.7	62.7	62.7	64.0	64.0	65.3	65.3
≥ 9000	30.0	43.3	48.7	51.3	56.0	56.7	60.0	60.7	60.7	62.7	62.7	64.0	64.0	65.3	65.3
≥ 8000	32.0	46.7	52.0	54.7	59.3	60.0	64.0	64.7	64.7	66.7	66.7	68.0	68.0	69.3	69.3
≥ 7000	32.0	46.7	52.0	54.7	59.3	60.0	64.0	64.7	64.7	66.7	66.7	68.0	68.0	69.3	69.3
≥ 6000	32.0	47.3	52.7	55.3	60.0	60.7	64.7	65.3	65.3	67.3	67.3	68.7	68.7	70.0	70.0
≥ 5000	32.0	47.3	52.7	55.3	60.0	60.7	64.7	65.3	65.3	67.3	67.3	68.7	68.7	70.0	70.0
≥ 4500	32.0	47.3	52.7	55.3	60.0	60.7	64.7	65.3	65.3	67.3	67.3	68.7	68.7	70.0	70.0
≥ 4000	32.0	48.7	54.0	57.3	62.0	62.7	66.7	67.3	67.3	69.3	69.3	70.7	70.7	72.0	72.0
≥ 3500	32.0	48.7	54.0	57.3	62.0	62.7	66.7	67.3	67.3	69.3	69.3	70.7	70.7	72.0	72.0
≥ 3000	32.7	50.7	56.0	60.0	64.7	65.3	69.3	70.0	70.0	72.0	72.0	73.3	73.3	74.7	74.7
≥ 2500	33.3	52.0	57.3	61.3	66.0	66.7	70.7	71.3	71.3	73.3	73.3	74.7	74.7	76.0	76.0
≥ 2000	33.3	53.3	59.3	63.3	68.7	69.3	73.3	74.0	74.0	76.0	76.0	77.3	77.3	78.7	78.7
≥ 1800	33.3	53.3	59.3	63.3	68.7	69.3	73.3	74.0	74.0	76.0	76.0	77.3	77.3	78.7	78.7
≥ 1500	33.3	53.3	59.3	63.3	68.7	69.3	73.3	74.0	74.0	76.7	76.7	78.0	78.0	79.3	79.3
≥ 1200	33.3	53.3	59.3	63.3	68.7	70.0	74.0	74.7	74.7	77.3	77.3	78.7	78.7	80.0	80.0
≥ 1000	33.3	54.0	60.7	64.7	70.0	72.0	76.7	78.0	78.0	80.7	80.7	82.0	82.0	83.3	83.3
≥ 900	33.3	54.7	61.3	65.3	70.7	72.7	78.0	79.3	79.3	82.0	82.0	83.3	83.3	84.7	84.7
≥ 800	33.3	54.7	61.3	65.3	71.3	73.3	78.7	80.0	80.0	82.7	82.7	84.0	84.0	85.3	85.3
≥ 700	33.3	54.7	61.3	65.3	71.3	73.3	78.7	80.0	80.0	82.7	82.7	84.0	84.0	85.3	85.3
≥ 600	33.3	54.7	61.3	66.0	72.0	74.0	79.3	80.7	80.7	83.3	83.3	84.7	84.7	86.0	86.0
≥ 500	33.3	54.7	61.3	66.7	72.7	75.3	80.7	82.0	82.0	85.3	85.3	86.7	86.7	88.0	88.0
≥ 400	33.3	54.7	61.3	67.3	74.0	76.7	82.7	84.7	84.7	88.7	88.7	90.7	90.7	92.0	92.0
≥ 300	33.3	54.7	61.3	68.0	75.3	78.0	84.7	87.3	87.3	91.3	91.3	93.3	93.3	94.7	94.7
≥ 200	33.3	54.7	61.3	68.0	76.0	78.7	85.3	88.0	88.0	92.0	92.0	94.0	94.0	95.3	95.3
≥ 100	33.3	54.7	61.3	68.0	76.0	78.7	85.3	88.7	88.7	92.7	92.7	94.7	94.7	96.0	96.0
0	33.3	54.7	61.3	68.0	76.0	78.7	85.3	88.7	88.7	92.7	92.7	94.7	94.7	99.3	100.0

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET SMOS

## CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

SEP

MONTH

07

HOURS (L S T)

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	16.0	27.3	29.3	34.0	37.3	40.7	43.3	44.0	44.0	44.7	45.3	45.3	45.3	46.0
≥ 20000	17.3	30.7	33.3	38.0	42.0	45.3	48.7	50.0	50.0	50.7	51.3	51.3	52.0	52.7
≥ 18000	17.3	30.7	33.3	38.0	42.0	45.3	48.7	50.0	50.0	50.7	51.3	51.3	52.0	52.7
≥ 16000	17.3	30.7	33.3	38.0	42.0	45.3	48.7	50.0	50.0	50.7	51.3	51.3	52.0	52.7
≥ 14000	17.3	30.7	33.3	38.0	42.0	45.3	48.7	50.0	50.0	50.7	51.3	51.3	52.0	52.7
≥ 12000	17.3	30.7	33.3	38.0	42.0	45.3	48.7	50.0	50.0	50.7	51.3	51.3	52.0	52.7
≥ 10000	18.0	35.3	38.0	43.3	47.3	50.7	54.0	55.3	55.3	56.0	56.7	56.7	58.7	59.3
≥ 9000	18.0	35.3	38.0	43.3	47.3	50.7	54.0	55.3	55.3	56.0	56.7	56.7	58.7	59.3
≥ 8000	18.7	37.3	40.7	46.7	51.3	55.3	58.7	60.0	60.0	60.7	61.3	61.3	64.0	64.0
≥ 7000	18.7	37.3	40.7	46.7	51.3	55.3	58.7	60.0	60.7	61.3	62.0	62.0	64.0	64.7
≥ 6000	18.7	37.3	40.7	46.7	51.3	56.7	60.0	61.3	61.3	62.0	62.7	62.7	64.7	65.3
≥ 5000	18.7	37.3	40.7	46.7	51.3	56.7	60.0	61.3	61.3	62.0	62.7	62.7	64.7	65.3
≥ 4500	18.7	38.0	41.3	47.3	52.0	57.3	60.7	62.0	62.0	62.7	63.3	63.3	66.0	66.0
≥ 4000	19.3	39.3	42.7	48.7	54.0	59.3	62.7	64.0	64.0	64.7	65.3	65.3	68.0	68.0
≥ 3500	20.0	40.0	43.3	50.0	56.0	61.3	66.0	67.3	67.3	68.0	68.7	68.7	70.7	71.3
≥ 3000	20.0	41.3	44.7	52.7	58.7	64.0	69.3	71.3	71.3	72.0	72.7	72.7	74.7	75.3
≥ 2500	20.0	41.3	44.7	52.7	58.7	64.7	70.0	72.0	72.0	72.7	73.3	73.3	75.3	76.0
≥ 2000	20.0	42.0	46.0	54.7	60.7	67.3	72.7	74.7	74.7	75.3	76.0	76.0	78.7	78.7
≥ 1800	20.0	42.7	46.7	55.3	61.3	68.7	74.0	76.0	76.0	76.7	77.3	77.3	80.0	80.0
≥ 1500	20.0	42.7	47.3	56.0	62.0	69.3	74.7	76.7	76.7	77.3	78.0	78.0	80.7	80.7
≥ 1200	20.0	42.7	47.3	56.0	62.7	70.0	76.0	78.0	78.0	79.3	80.0	80.0	82.7	82.7
≥ 1000	20.0	42.7	48.0	56.7	63.3	70.7	77.3	79.3	79.3	80.7	82.7	82.7	85.3	85.3
≥ 900	20.0	42.7	48.0	56.7	63.3	70.7	77.3	79.3	79.3	80.7	82.7	82.7	85.3	85.3
≥ 800	20.0	42.7	48.7	57.3	64.7	72.7	79.3	81.3	81.3	82.7	84.7	84.7	87.3	87.3
≥ 700	20.0	43.3	49.3	58.0	65.3	73.3	80.0	82.0	82.0	83.3	85.3	85.3	88.0	88.0
≥ 600	20.0	43.3	49.3	58.0	66.7	74.7	81.3	84.0	84.0	85.3	87.3	87.3	90.0	90.0
≥ 500	20.0	44.0	50.0	58.7	67.3	75.3	82.7	85.3	85.3	86.7	89.3	89.3	92.7	92.7
≥ 400	20.0	44.0	50.0	58.7	67.3	76.7	84.0	87.3	87.3	90.0	92.7	92.7	95.3	96.0
≥ 300	20.0	44.0	50.0	58.7	68.0	77.3	84.7	88.0	88.0	90.7	93.3	93.3	96.7	96.7
≥ 200	20.0	44.0	50.0	58.7	68.0	77.3	84.7	88.0	88.0	91.3	94.0	94.0	97.3	98.0
≥ 100	20.0	44.0	50.0	58.7	68.0	77.3	84.7	88.0	88.0	91.3	94.0	94.0	97.3	98.0
≥ 0	20.0	44.0	50.0	53.7	68.0	77.3	84.7	88.0	88.0	91.3	94.0	94.0	97.3	100.0

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

SEP

STATION NAME

YEARS

MORTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

10  
HOURS (L S T)

CEILING (FEET)	VISIBILITY (STATUTE MILES)														
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	≥ 0
NO CEILING	20.0	39.3	41.3	43.3	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
≥ 20000	21.3	44.0	46.0	48.0	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3
≥ 18000	21.3	44.0	46.0	48.0	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3
≥ 16000	21.3	44.0	46.0	48.0	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3
≥ 14000	21.3	44.0	46.0	48.0	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3
≥ 12000	21.3	44.0	46.0	48.0	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3	49.3
≥ 10000	22.0	47.3	50.0	53.3	54.7	55.3	55.3	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 9000	22.0	47.3	50.0	53.3	54.7	55.3	55.3	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 8000	24.0	52.0	54.7	59.3	61.3	62.7	62.7	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3
≥ 7000	24.0	52.0	54.7	59.3	61.3	62.7	62.7	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3
≥ 6000	24.7	52.7	56.0	60.7	62.7	64.0	64.0	64.7	64.7	64.7	64.7	64.7	64.7	64.7	64.7
≥ 5000	24.7	52.7	56.0	60.7	62.7	64.0	64.0	64.7	64.7	64.7	64.7	64.7	64.7	64.7	64.7
≥ 4500	25.3	53.3	56.7	61.3	63.3	64.7	64.7	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3
≥ 4000	25.3	53.3	56.7	61.3	63.3	64.7	64.7	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3
≥ 3500	26.0	56.0	60.0	64.7	67.3	69.3	69.3	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
≥ 3000	26.0	57.3	62.0	68.7	72.0	74.0	75.3	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0
≥ 2500	26.0	57.3	62.0	68.7	72.0	74.0	75.3	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0
≥ 2000	26.0	58.0	64.0	72.0	75.3	78.0	80.7	81.3	81.3	82.0	82.7	82.7	82.7	82.7	82.7
≥ 1800	26.0	58.0	64.0	72.0	75.3	78.0	80.7	81.3	81.3	82.0	82.7	82.7	82.7	82.7	82.7
≥ 1500	26.0	59.3	65.3	73.3	76.7	80.0	83.3	84.0	84.0	84.7	85.3	85.3	85.3	85.3	85.3
≥ 1200	26.0	59.3	65.3	73.3	76.7	80.0	83.3	84.0	84.0	84.7	85.3	85.3	85.3	85.3	85.3
≥ 1000	26.7	60.0	68.0	77.3	82.0	85.3	89.3	90.0	90.0	90.7	91.3	91.3	91.3	91.3	91.3
≥ 900	26.7	60.0	68.0	77.3	82.0	85.3	89.3	90.0	90.0	90.7	91.3	91.3	91.3	91.3	91.3
≥ 800	26.7	60.0	68.0	77.3	82.0	85.3	89.3	90.0	90.0	90.7	91.3	91.3	91.3	91.3	91.3
≥ 700	26.7	60.0	68.0	77.3	82.0	85.3	89.3	90.0	90.0	90.7	91.3	91.3	91.3	91.3	91.3
≥ 600	26.7	60.0	68.0	77.3	82.0	85.3	89.3	90.0	90.0	90.7	91.3	91.3	91.3	91.3	91.3
≥ 500	26.7	60.0	68.0	77.3	82.0	85.3	89.3	90.0	90.0	90.7	91.3	91.3	91.3	91.3	91.3
≥ 400	26.7	60.0	68.0	77.3	82.0	85.3	89.3	90.0	90.0	90.7	91.3	91.3	91.3	91.3	91.3
≥ 300	26.7	60.0	68.0	77.3	82.0	85.3	89.3	90.0	90.0	90.7	91.3	91.3	91.3	91.3	91.3
≥ 200	26.7	60.0	68.0	77.3	82.0	85.3	89.3	90.0	90.0	90.7	91.3	91.3	91.3	91.3	91.3
≥ 100	26.7	60.0	68.0	77.3	82.0	85.3	89.3	90.0	90.0	90.7	91.3	91.3	91.3	91.3	91.3
≥ 0	26.7	60.0	68.0	77.3	82.0	85.3	89.3	90.0	90.0	90.7	91.3	91.3	91.3	91.3	91.3

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

SEP  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

13  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)											
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½
NO CEILING	18.0	36.0	41.3	42.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7
≥ 20000	19.3	40.0	45.3	46.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
≥ 18000	19.3	40.0	45.3	46.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
≥ 16000	19.3	40.0	45.3	46.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
≥ 14000	19.3	40.0	45.3	46.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
≥ 12000	20.7	42.0	47.3	48.7	50.7	50.7	50.7	50.7	50.7	50.7	50.7	50.7
≥ 10000	23.3	46.7	52.7	54.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 9000	23.3	46.7	52.7	54.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 8000	25.3	50.0	56.7	59.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3
≥ 7000	25.3	50.0	56.7	59.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3
≥ 6000	25.3	50.7	57.3	60.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7
≥ 5000	25.3	50.7	57.3	60.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7
≥ 4500	26.0	51.3	58.7	62.7	64.7	64.7	64.7	64.7	64.7	64.7	64.7	64.7
≥ 4000	27.3	54.0	61.3	65.3	67.3	67.3	67.3	67.3	67.3	67.3	67.3	67.3
≥ 3500	27.3	54.0	62.0	66.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
≥ 3000	28.0	59.3	68.0	73.3	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0
≥ 2500	28.7	63.3	72.7	78.7	82.0	82.7	82.7	82.7	82.7	82.7	82.7	82.7
≥ 2000	28.7	65.3	74.7	80.7	84.7	85.3	85.3	85.3	85.3	85.3	85.3	85.3
≥ 1800	28.7	65.3	74.7	80.7	84.7	85.3	85.3	85.3	85.3	85.3	85.3	85.3
≥ 1500	29.3	67.3	78.0	85.3	89.3	90.0	90.0	90.0	90.0	90.0	90.0	90.0
≥ 1200	29.3	68.0	78.7	86.0	90.0	90.7	90.7	90.7	90.7	90.7	90.7	90.7
≥ 1000	29.3	68.0	79.3	86.7	91.3	92.0	92.0	92.0	92.0	92.0	92.0	92.0
≥ 900	29.3	68.0	79.3	86.7	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7
≥ 800	29.3	68.7	80.0	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0
≥ 700	29.3	68.7	80.0	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0
≥ 600	29.3	68.7	80.0	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0
≥ 500	29.3	68.7	80.0	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0
≥ 400	29.3	68.7	80.0	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0
≥ 300	29.3	68.7	80.0	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0
≥ 200	29.3	68.7	80.0	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0
≥ 100	29.3	68.7	80.0	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0
0	29.3	68.7	80.0	88.0	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

SEP

STATION

STATION NAME

YEARS

MONTH

16

HOURS (LST)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ 5/16	≥ ¼
NO CEILING	20.0	38.7	41.3	44.7	45.3	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7
≥ 20000	22.0	43.3	46.7	50.0	50.7	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
≥ 18000	22.0	43.3	46.7	50.0	50.7	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
≥ 16000	22.0	43.3	46.7	50.0	50.7	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
≥ 14000	22.0	43.3	46.7	50.0	50.7	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
≥ 12000	22.0	44.7	48.0	52.0	52.7	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
≥ 10000	22.0	48.7	52.7	57.3	58.0	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3
≥ 9000	22.0	48.7	52.7	57.3	58.0	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3
≥ 8000	24.0	52.0	58.0	62.7	63.3	64.7	64.7	64.7	64.7	64.7	64.7	64.7	64.7
≥ 7000	24.0	52.0	58.0	62.7	63.3	64.7	64.7	64.7	64.7	64.7	64.7	64.7	64.7
≥ 6000	24.0	52.7	58.7	63.3	64.0	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3
≥ 5000	24.0	54.7	60.7	65.3	66.0	67.3	67.3	67.3	67.3	67.3	67.3	67.3	67.3
≥ 4500	24.7	55.3	61.3	66.0	66.7	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
≥ 4000	25.3	58.7	65.3	70.0	70.7	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0
≥ 3500	25.3	59.3	66.7	71.3	72.0	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3
≥ 3000	26.7	64.7	74.0	78.7	80.7	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0
≥ 2500	26.7	66.0	75.3	81.3	84.0	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3
≥ 2000	27.3	68.0	77.3	83.3	86.7	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0
≥ 1800	27.3	68.0	77.3	83.3	86.7	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0
≥ 1500	27.3	68.7	78.7	85.3	89.3	90.7	90.7	91.3	91.3	91.3	91.3	91.3	91.3
≥ 1200	27.3	69.3	80.0	86.7	91.3	92.7	92.7	93.3	93.3	94.0	94.0	94.0	94.0
≥ 1000	27.3	69.3	80.0	86.7	92.0	93.3	93.3	94.0	94.0	94.7	94.7	94.7	94.7
≥ 900	27.3	69.3	80.0	86.7	92.0	93.3	93.3	94.0	94.0	94.7	94.7	94.7	94.7
≥ 800	27.3	69.3	80.7	87.3	92.7	94.0	94.0	94.7	94.7	95.3	95.3	95.3	95.3
≥ 700	27.3	69.3	80.7	87.3	92.7	94.0	94.0	94.7	94.7	95.3	95.3	95.3	95.3
≥ 600	27.3	69.3	80.7	88.0	93.3	94.7	94.7	95.3	95.3	96.7	96.7	96.7	96.7
≥ 500	27.3	69.3	80.7	88.0	93.3	94.7	94.7	95.3	95.3	96.7	96.7	96.7	96.7
≥ 400	27.3	70.0	81.3	89.3	94.7	96.7	96.7	97.3	97.3	98.7	98.7	98.7	98.7
≥ 300	27.3	70.0	81.3	89.3	94.7	96.7	96.7	97.3	97.3	98.7	98.7	98.7	98.7
≥ 200	27.3	70.0	81.3	89.3	94.7	96.7	96.7	97.3	97.3	98.7	98.7	98.7	98.7
≥ 100	27.3	70.0	81.3	89.3	94.7	96.7	96.7	97.3	97.3	98.7	98.7	98.7	98.7
0	27.3	70.0	81.3	89.3	94.7	96.7	96.7	97.3	97.3	98.7	98.7	98.7	98.7

TOTAL NUMBER OF OBSERVATIONS

150

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# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

SEP  
MONTH

19

HOURS (L.S.T.)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ ¼
NO CEILING	24.0	38.7	42.7	44.7	47.3	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
≥ 20000	24.7	40.7	45.3	49.3	52.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
AI 18000	24.7	40.7	45.3	49.3	52.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
AI 16000	24.7	40.7	45.3	49.3	52.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
AI 14000	24.7	40.7	45.3	49.3	52.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
AI 12000	25.3	42.7	48.0	52.0	55.3	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0
AI 10000	27.3	47.3	54.7	59.3	62.7	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3
AI 9000	27.3	47.3	54.7	59.3	62.7	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3
AI 8000	29.3	50.0	58.7	64.0	68.0	70.7	70.7	70.7	70.7	70.7	70.7	70.7	70.7
AI 7000	30.0	50.7	59.3	64.7	68.7	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3
AI 6000	30.0	52.7	61.3	66.7	70.7	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3
AI 5000	30.7	53.3	62.7	68.0	72.0	74.7	74.7	74.7	74.7	74.7	74.7	74.7	74.7
AI 4500	30.7	54.7	64.0	69.3	73.3	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0
AI 4000	30.7	54.7	64.0	69.3	73.3	76.7	76.7	76.7	76.7	76.7	76.7	76.7	76.7
AI 3500	32.0	56.0	65.3	72.0	76.0	79.3	79.3	79.3	79.3	79.3	79.3	79.3	79.3
AI 3000	34.0	60.0	70.7	77.3	81.3	84.7	84.7	84.7	84.7	84.7	84.7	84.7	84.7
AI 2500	34.0	61.3	72.0	78.7	82.7	86.0	86.7	86.7	86.7	86.7	86.7	86.7	86.7
AI 2000	34.0	62.0	73.3	80.0	84.0	88.0	88.7	88.7	88.7	88.7	88.7	88.7	88.7
AI 1800	34.0	62.0	73.3	80.0	84.0	88.0	88.7	88.7	88.7	88.7	88.7	88.7	88.7
AI 1500	34.0	62.0	74.0	80.7	84.7	88.7	89.3	89.3	89.3	89.3	89.3	89.3	89.3
AI 1200	34.0	62.7	74.7	81.3	85.3	89.3	90.0	90.0	90.0	90.0	90.0	90.0	90.0
AI 1000	34.0	62.7	74.7	81.3	86.7	90.7	91.3	91.3	91.3	91.3	91.3	91.3	91.3
AI 900	34.0	62.7	74.7	81.3	86.7	90.7	91.3	91.3	91.3	91.3	91.3	91.3	91.3
AI 800	34.0	63.3	75.3	82.0	87.3	92.0	92.7	93.3	93.3	93.3	93.3	93.3	93.3
AI 700	34.0	63.3	75.3	82.0	87.3	92.0	92.7	93.3	93.3	93.3	93.3	93.3	93.3
AI 600	34.0	64.0	76.0	82.7	88.7	94.0	94.7	95.3	95.3	96.0	96.0	96.0	96.0
AI 500	34.0	64.0	76.0	82.7	88.7	94.0	94.7	95.3	95.3	96.0	96.0	96.0	96.0
AI 400	34.0	64.0	76.0	82.7	88.7	94.0	94.7	96.0	96.0	97.3	97.3	97.3	97.3
AI 300	34.0	64.0	76.7	83.3	89.3	94.7	96.0	97.3	97.3	100.0	100.0	100.0	100.0
AI 200	34.0	64.0	76.7	83.3	89.3	94.7	96.0	97.3	97.3	100.0	100.0	100.0	100.0
AI 100	34.0	64.0	76.7	83.3	89.3	94.7	96.0	97.3	97.3	100.0	100.0	100.0	100.0
AI AI	34.0	64.0	76.7	83.3	89.3	94.7	96.0	97.3	97.3	100.0	100.0	100.0	100.0

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

SEP  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

22  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)														≥ 0
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	
NO CEILING	22.7	36.7	42.7	44.0	48.0	46.0	48.0	48.0	48.0	48.7	48.7	48.7	48.7	48.7	48.7
≥ 20000	26.7	42.0	49.3	51.3	55.3	55.3	55.3	55.3	55.3	56.0	56.0	56.0	56.0	56.0	56.0
≥ 18000	26.7	42.0	49.3	51.3	55.3	55.3	55.3	55.3	55.3	56.0	56.0	56.0	56.0	56.0	56.0
≥ 16000	26.7	42.0	49.3	51.3	55.3	55.3	55.3	55.3	55.3	56.0	56.0	56.0	56.0	56.0	56.0
≥ 14000	27.3	42.7	50.0	52.0	56.0	56.0	56.0	56.0	56.0	56.7	56.7	56.7	56.7	56.7	56.7
≥ 12000	28.0	43.3	50.7	52.7	56.7	56.7	56.7	56.7	56.7	57.3	57.3	57.3	57.3	57.3	57.3
≥ 10000	32.0	48.0	56.7	59.3	63.3	64.0	64.0	64.0	64.0	64.7	64.7	64.7	64.7	64.7	64.7
≥ 9000	32.0	48.0	56.7	59.3	63.3	64.0	64.0	64.0	64.0	64.7	64.7	64.7	64.7	64.7	64.7
≥ 8000	35.3	52.0	62.0	64.7	68.7	70.0	70.7	70.7	70.7	71.3	71.3	71.3	71.3	71.3	71.3
≥ 7000	35.3	52.0	62.0	64.7	68.7	70.0	70.7	70.7	70.7	71.3	71.3	71.3	71.3	71.3	71.3
≥ 6000	36.0	52.7	62.7	65.3	69.3	70.7	71.3	71.3	71.3	72.0	72.0	72.0	72.0	72.0	72.0
≥ 5000	37.3	54.0	64.0	66.7	70.7	72.0	72.7	72.7	72.7	73.3	73.3	73.3	73.3	73.3	73.3
≥ 4500	37.3	54.0	64.0	66.7	70.7	72.0	72.7	73.3	73.3	74.0	74.0	74.0	74.0	74.0	74.0
≥ 4000	37.3	56.0	66.0	68.7	73.3	74.7	75.3	76.0	76.0	76.7	76.7	76.7	76.7	76.7	76.7
≥ 3500	38.0	57.3	68.0	71.3	76.0	77.3	78.0	78.7	78.7	79.3	79.3	79.3	79.3	79.3	79.3
≥ 3000	40.0	61.3	72.7	76.0	80.7	82.0	82.7	83.3	83.3	84.0	84.0	84.0	84.0	84.0	84.0
≥ 2500	40.0	62.0	73.3	76.7	82.0	83.3	84.0	84.7	84.7	85.3	85.3	85.3	85.3	85.3	85.3
≥ 2000	40.0	62.0	73.3	76.7	82.0	84.0	84.7	86.0	86.0	86.7	86.7	86.7	86.7	86.7	86.7
≥ 1800	40.0	62.0	73.3	76.7	82.0	84.0	84.7	86.0	86.0	86.7	86.7	86.7	86.7	86.7	86.7
≥ 1500	40.0	62.7	74.7	78.0	83.3	85.3	86.0	87.3	87.3	88.0	88.0	88.0	88.0	88.0	88.0
≥ 1200	40.7	63.3	75.3	78.7	84.0	86.0	86.7	88.0	88.0	88.7	88.7	88.7	88.7	88.7	88.7
≥ 1000	40.7	63.3	75.3	78.7	84.0	86.7	87.3	88.7	88.7	89.3	89.3	89.3	89.3	89.3	89.3
≥ 900	40.7	63.3	75.3	78.7	84.0	86.7	87.3	88.7	89.3	90.0	90.0	90.0	90.0	90.0	90.0
≥ 800	40.7	64.0	76.0	79.3	84.7	87.3	88.7	90.7	90.7	91.3	91.3	91.3	91.3	91.3	91.3
≥ 700	40.7	64.0	76.0	79.3	84.7	88.0	89.3	91.3	91.3	92.0	92.0	92.0	92.0	92.0	92.0
≥ 600	40.7	64.0	76.7	80.0	86.0	89.3	90.7	92.7	92.7	94.0	94.0	94.0	94.0	94.0	94.0
≥ 500	40.7	64.0	76.7	80.0	86.7	90.0	91.3	93.3	93.3	94.7	94.7	94.7	94.7	94.7	94.7
≥ 400	40.7	64.0	78.0	81.3	88.0	91.3	92.7	95.3	95.3	96.7	96.7	96.7	96.7	96.7	96.7
≥ 300	40.7	64.0	78.0	81.3	88.0	91.3	94.0	96.7	97.3	98.7	98.7	98.7	98.7	98.7	98.7
≥ 200	40.7	64.0	78.0	81.3	88.0	91.3	94.0	96.7	97.3	98.7	99.3	99.3	99.3	99.3	99.3
≥ 100	40.7	64.0	78.0	81.3	88.0	91.3	94.0	96.7	97.3	99.3	100.0	100.0	100.0	100.0	100.0
≥ 0	40.7	64.0	78.0	81.3	88.0	91.3	94.0	96.7	97.3	99.3	100.0	100.0	100.0	100.0	100.0

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

SEP

STATION NAME

YEARS

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

ALL

HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 0
NO CEILING	20.8	35.9	39.9	42.2	44.8	45.6	46.4	46.8	47.2	47.3	47.3	47.4	47.6
≥ 20000	22.8	40.0	44.4	47.0	49.8	50.8	51.8	52.3	52.3	52.7	52.8	52.9	53.3
≥ 18000	22.8	40.0	44.4	47.0	49.8	50.8	51.8	52.3	52.3	52.7	52.8	52.9	53.3
≥ 16000	22.8	40.0	44.4	47.0	49.8	50.8	51.8	52.3	52.3	52.7	52.8	52.9	53.3
≥ 14000	22.8	40.2	44.6	47.2	50.0	50.9	51.9	52.4	52.4	52.8	52.9	53.1	53.4
≥ 12000	23.4	41.3	45.8	48.6	51.5	52.5	53.5	54.0	54.0	54.4	54.5	54.7	55.0
≥ 10000	25.4	45.3	51.1	54.6	57.5	58.7	59.8	60.4	60.4	60.8	60.9	61.3	61.7
≥ 9000	25.4	45.3	51.1	54.6	57.5	58.7	59.8	60.4	60.4	60.8	60.9	61.3	61.7
≥ 8000	27.3	48.4	55.0	59.1	62.3	63.7	65.1	65.7	66.1	66.2	66.2	66.6	66.9
≥ 7000	27.4	48.5	55.1	59.2	62.3	63.8	65.3	65.6	65.8	66.3	66.3	66.8	67.1
≥ 6000	27.6	49.3	55.9	60.1	63.3	64.9	66.3	66.9	67.3	67.4	67.4	67.9	68.2
≥ 5000	27.9	50.0	56.8	61.0	64.3	65.8	67.3	67.8	68.3	68.3	68.3	68.8	69.1
≥ 4500	28.2	50.6	57.5	61.8	65.0	66.6	68.0	68.7	69.1	69.2	69.2	69.7	69.9
≥ 4000	28.5	52.2	59.3	63.6	67.1	68.8	70.3	70.9	71.3	71.4	71.4	71.9	72.2
≥ 3500	29.0	52.9	60.3	65.0	68.6	70.3	71.9	72.6	73.0	73.1	73.1	73.6	73.8
≥ 3000	29.9	56.0	64.2	69.7	73.6	75.3	77.2	77.9	78.3	78.4	78.4	78.9	79.2
≥ 2500	30.2	57.2	65.5	71.4	75.6	77.5	79.5	80.3	80.8	80.8	80.8	81.3	81.6
≥ 2000	30.3	58.3	66.9	72.9	77.3	79.7	81.8	82.6	83.2	83.3	83.3	83.8	84.1
≥ 1800	30.3	58.3	67.0	73.0	77.4	79.8	81.9	82.8	83.3	83.5	83.5	84.0	84.3
≥ 1500	30.5	59.1	68.3	74.5	79.0	81.5	83.7	84.6	85.3	85.4	85.4	85.9	86.2
≥ 1200	30.6	59.4	68.7	74.9	79.6	82.2	84.4	85.3	86.2	86.3	86.3	86.8	87.1
≥ 1000	30.7	59.7	69.4	75.9	81.2	83.9	86.4	87.5	88.4	88.4	88.4	89.2	89.5
≥ 900	30.7	59.8	69.5	76.0	81.3	84.1	86.7	87.8	88.8	89.1	89.1	89.6	89.8
≥ 800	30.7	60.0	70.0	76.6	82.2	85.1	87.8	89.1	90.1	90.4	90.4	90.9	91.2
≥ 700	30.7	60.1	70.1	76.7	82.3	85.3	88.0	89.3	90.3	90.6	90.6	91.0	91.3
≥ 600	30.7	60.3	70.3	77.2	83.1	86.2	89.1	90.4	91.6	92.0	92.0	92.4	92.8
≥ 500	30.7	60.3	70.5	77.5	83.8	87.1	90.1	91.7	93.1	93.8	93.8	94.3	94.6
≥ 400	30.7	60.4	70.8	78.0	84.4	88.0	91.2	93.2	94.9	95.8	95.8	96.3	96.7
≥ 300	30.7	60.4	70.8	78.2	84.8	88.4	92.0	94.2	96.2	97.2	97.2	97.7	98.0
≥ 200	30.7	60.4	70.8	78.2	84.8	88.5	92.2	94.4	96.6	97.8	97.8	98.3	98.6
≥ 100	30.7	60.4	70.8	78.2	84.8	88.5	92.2	94.5	96.7	98.3	98.3	98.9	99.4
0	30.7	60.4	70.8	78.2	84.8	88.5	92.2	94.5	96.7	97.0	98.3	99.1	100.0

TOTAL NUMBER OF OBSERVATIONS

1200

DIRNAVOCEANMET SMOS

## CEILING VERSUS VISIBILITY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

OCT  
MONTHPERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)01  
HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 0
NO CEILING	38.1	49.0	51.6	52.9	53.5	56.8	57.4	58.1	58.1	58.1	58.1	58.1	58.1
≥ 20000	40.0	53.6	56.1	57.4	60.7	61.9	62.6	63.2	63.2	63.2	63.9	63.9	63.9
≥ 18000	40.0	53.6	56.1	57.4	60.7	61.9	62.6	63.2	63.2	63.2	63.9	63.9	63.9
≥ 16000	40.0	53.6	56.1	57.4	60.7	61.9	62.6	63.2	63.2	63.2	63.9	63.9	63.9
≥ 14000	40.0	53.6	56.1	57.4	60.7	61.9	62.6	63.2	63.2	63.2	63.9	63.9	63.9
≥ 12000	40.0	53.6	56.1	57.4	60.7	61.9	62.6	63.2	63.2	63.2	63.9	63.9	63.9
≥ 10000	42.6	58.7	61.9	63.2	66.5	67.7	68.4	69.0	69.0	69.0	69.7	69.7	69.7
≥ 9000	42.6	58.7	61.9	63.2	66.5	67.7	68.4	69.0	69.0	69.0	69.7	69.7	69.7
≥ 8000	44.5	62.6	66.5	68.4	71.6	72.9	73.6	74.2	74.2	74.2	74.8	74.8	74.8
≥ 7000	44.5	62.6	66.5	68.4	71.6	72.9	73.6	74.2	74.2	74.2	74.8	74.8	74.8
≥ 6000	44.5	62.6	66.5	68.4	71.6	72.9	73.6	74.2	74.2	74.2	74.8	74.8	74.8
≥ 5000	44.5	63.2	67.1	69.0	72.3	73.6	74.8	75.5	75.5	75.5	76.1	76.1	76.1
≥ 4500	44.5	63.2	67.1	69.0	72.3	73.6	74.8	75.5	75.5	75.5	76.1	76.1	76.1
≥ 4000	45.8	65.2	69.7	71.6	74.8	76.1	77.4	78.1	78.1	78.7	79.4	79.4	79.4
≥ 3500	45.8	65.8	70.3	72.9	76.1	77.4	78.7	79.4	79.4	80.0	80.7	80.7	80.7
≥ 3000	45.8	65.8	70.3	72.9	76.1	77.4	78.7	79.4	79.4	80.0	80.7	80.7	80.7
≥ 2500	46.5	66.5	72.3	74.8	78.1	79.4	80.7	81.3	81.3	81.9	82.6	82.6	82.6
≥ 2000	47.1	67.1	72.9	76.1	79.4	80.7	81.9	82.6	82.6	83.2	83.9	83.9	83.9
≥ 1800	47.1	67.1	72.9	76.1	79.4	80.7	81.9	82.6	82.6	83.2	83.9	83.9	83.9
≥ 1500	47.7	67.7	74.2	77.4	81.3	82.6	83.9	84.5	84.5	85.2	85.8	85.8	85.8
≥ 1200	47.7	69.0	75.5	78.7	82.6	84.5	85.8	86.5	86.5	87.1	87.7	87.7	87.7
≥ 1000	48.4	69.7	76.1	79.4	83.2	85.2	86.5	87.1	87.1	87.7	88.4	88.4	88.4
≥ 900	48.4	69.7	76.1	79.4	83.2	85.2	86.5	87.1	87.1	87.7	88.4	88.4	88.4
≥ 800	48.4	69.7	76.1	79.4	83.9	85.8	86.4	89.7	89.7	90.3	91.0	91.0	91.6
≥ 700	48.4	69.7	76.1	79.4	83.9	85.8	86.4	89.7	89.7	90.3	91.0	91.0	91.6
≥ 600	48.4	69.7	76.1	79.4	83.9	85.8	89.0	90.3	90.3	91.0	91.6	91.6	92.3
≥ 500	48.4	69.7	76.1	79.4	83.9	85.8	89.0	90.3	90.3	91.0	91.6	91.6	92.3
≥ 400	48.4	69.7	76.1	79.4	84.5	86.5	90.3	91.6	91.6	92.3	92.9	93.6	94.2
≥ 300	48.4	70.3	76.8	80.0	85.8	87.7	93.6	94.8	94.8	95.8	97.4	98.1	98.7
≥ 200	48.4	70.3	76.8	80.0	85.8	87.7	93.6	94.8	94.8	96.8	97.4	98.1	98.7
≥ 100	48.4	70.3	76.8	80.0	85.8	87.7	93.6	94.8	94.8	96.8	97.4	98.1	98.7
0	48.4	70.3	76.8	80.0	85.8	87.7	93.6	94.8	94.8	96.8	97.4	98.1	98.7
0	48.4	70.3	76.8	80.0	85.8	87.7	93.6	94.8	94.8	96.8	97.4	98.1	98.7

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

OCT

STATION

STATION NAME

YEARS

NORTH

04

HOURS (L.S.T.)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	32.3	46.5	47.1	47.7	50.3	50.3	51.0	52.3	52.3	53.6	54.2	54.2	54.2	54.8
≥ 20000	32.9	48.4	49.0	49.7	52.3	52.9	53.6	54.8	54.8	56.1	56.8	56.8	56.8	57.4
≥ 18000	32.9	48.4	49.0	49.7	52.3	52.9	53.6	54.8	54.8	56.1	56.8	56.8	56.8	57.4
≥ 16000	32.9	48.4	49.0	49.7	52.3	52.9	53.6	54.8	54.8	56.1	56.8	56.8	56.8	57.4
≥ 14000	32.9	48.4	49.0	49.7	52.3	52.9	53.6	54.8	54.8	56.1	56.8	56.8	56.8	57.4
≥ 12000	33.6	49.0	49.7	50.3	52.9	53.6	54.2	55.5	55.5	56.8	57.4	57.4	57.4	58.1
≥ 10000	36.1	54.2	56.1	56.8	59.4	60.0	60.7	61.9	61.9	63.2	63.9	63.9	63.9	64.5
≥ 9000	36.1	54.2	56.1	56.8	59.4	60.0	60.7	61.9	61.9	63.2	63.9	63.9	63.9	64.5
≥ 8000	39.4	58.1	60.0	60.7	63.9	65.2	65.8	67.1	67.1	68.4	69.0	69.0	69.0	69.7
≥ 7000	39.4	58.1	60.0	60.7	63.9	65.2	65.8	67.1	67.1	68.4	69.0	69.0	69.0	69.7
≥ 6000	40.0	58.7	60.7	61.3	64.5	65.8	66.5	67.7	67.7	69.0	69.7	69.7	69.7	70.3
≥ 5000	40.0	60.7	62.6	63.2	66.5	67.7	68.4	69.7	69.7	71.0	71.6	71.6	71.6	72.3
≥ 4500	40.0	60.7	62.6	63.2	67.1	68.4	69.0	70.3	70.3	71.6	72.3	72.3	72.3	73.6
≥ 4000	41.3	62.6	64.5	65.2	69.0	70.3	71.0	72.3	72.3	74.2	74.8	74.8	74.8	76.1
≥ 3500	41.3	62.6	64.5	65.2	69.0	70.3	71.0	72.3	72.3	74.2	74.8	74.8	74.8	76.1
≥ 3000	41.3	63.2	65.2	65.8	69.7	71.0	72.3	73.6	73.6	75.5	76.1	76.1	76.1	77.4
≥ 2500	41.9	63.9	65.8	67.1	71.0	72.3	73.6	74.8	74.8	76.8	77.4	77.4	77.4	78.7
≥ 2000	42.6	64.5	66.5	67.7	71.6	72.9	74.2	75.5	76.1	78.1	78.7	78.7	78.7	80.0
≥ 1800	43.2	65.2	67.1	69.0	72.9	74.2	75.5	76.8	77.4	79.4	80.0	80.0	80.0	81.3
≥ 1500	43.2	66.5	68.4	71.0	74.8	76.8	78.1	79.4	80.0	81.9	82.6	82.6	82.6	83.9
≥ 1200	43.2	66.5	68.4	71.0	74.8	76.8	78.1	79.4	80.0	81.9	82.6	82.6	82.6	83.9
≥ 1000	43.2	66.5	68.4	72.3	76.8	79.4	80.7	81.9	83.2	85.8	86.5	86.5	87.1	87.7
≥ 900	43.2	66.5	68.4	72.3	76.8	79.4	81.3	82.6	83.9	86.5	87.1	87.1	87.7	88.4
≥ 800	43.2	66.5	68.4	72.3	76.8	80.0	81.9	83.2	84.5	87.1	87.7	87.7	88.4	89.0
≥ 700	43.2	66.5	68.4	72.3	76.8	80.0	81.9	83.2	84.5	87.1	87.7	87.7	88.4	89.0
≥ 600	43.2	66.5	68.4	72.3	76.8	80.0	81.9	83.2	84.5	87.1	87.7	87.7	88.4	89.0
≥ 500	43.2	66.5	69.0	72.9	77.4	80.7	83.2	84.5	85.8	88.4	89.0	89.0	90.3	91.0
≥ 400	43.2	66.5	69.7	73.6	78.1	81.3	83.9	85.8	87.1	90.3	91.0	91.0	92.3	92.9
≥ 300	43.2	66.5	69.7	73.6	78.1	81.3	83.9	85.8	87.1	90.3	91.0	91.0	92.3	92.9
≥ 200	43.2	66.5	69.7	73.6	78.1	81.3	83.9	87.1	88.4	91.6	92.3	92.3	93.6	94.8
≥ 100	43.2	66.5	69.7	73.6	78.1	81.3	83.9	87.1	88.4	91.6	92.3	92.3	94.8	95.5
0	43.2	66.5	69.7	73.6	78.1	81.3	83.9	87.1	88.4	92.3	93.6	93.6	96.1	96.8

155

TOTAL NUMBER OF OBSERVATIONS

DIRNAVOCEANMET SMOS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

OCT

STATION NAME

YEAR

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

07

HOURLY (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	21.3	40.7	43.2	44.3	46.3	47.1	47.1	48.4	48.4	49.7	51.0	51.0	51.0	51.6
≥ 20000	22.6	42.6	45.8	47.1	49.7	51.0	51.0	52.3	52.3	53.6	54.8	54.8	55.5	56.1
≥ 18000	22.6	42.6	45.8	47.1	49.7	51.0	51.0	52.3	52.3	53.6	54.8	54.8	55.5	56.1
≥ 16000	22.6	42.6	45.8	47.1	49.7	51.0	51.0	52.3	52.3	53.6	54.8	54.8	55.5	56.1
≥ 14000	23.2	43.9	47.1	49.0	51.6	52.9	52.9	54.2	54.2	55.5	56.8	56.8	57.4	58.1
≥ 12000	23.2	44.5	47.7	49.7	52.3	53.6	53.6	54.8	54.8	56.1	57.4	57.4	58.1	59.4
≥ 10000	24.5	47.1	50.3	52.3	55.5	56.8	56.8	58.1	58.1	59.4	60.7	61.3	61.9	62.6
≥ 8000	24.5	47.1	50.3	52.3	56.1	57.4	57.4	58.7	58.7	60.0	61.3	61.9	61.9	62.6
≥ 6000	26.5	51.0	55.5	57.4	61.3	62.6	62.6	64.5	64.5	65.8	67.1	67.1	67.7	68.4
≥ 5000	26.5	51.0	56.1	58.1	61.9	63.2	63.2	65.2	65.2	66.5	67.7	67.7	68.4	69.0
≥ 4500	26.5	51.6	56.8	58.7	62.6	63.9	63.9	65.8	65.8	67.1	68.4	68.4	69.0	69.7
≥ 4000	26.5	52.3	57.4	59.4	63.2	64.5	64.5	66.5	66.5	67.7	69.0	69.0	69.7	70.3
≥ 3500	26.5	53.6	58.7	60.7	64.5	65.8	65.8	67.7	67.7	69.0	70.3	70.3	71.0	71.6
≥ 3000	26.5	55.5	60.7	62.6	66.5	67.7	67.7	69.7	69.7	71.0	72.3	72.3	73.6	74.2
≥ 2500	27.7	56.8	61.9	63.9	67.7	69.0	69.0	71.0	71.0	72.3	73.6	73.6	74.8	75.5
≥ 2000	29.7	59.4	64.5	66.5	71.0	72.3	72.3	74.2	74.2	76.1	76.1	76.1	78.7	79.4
≥ 1800	30.3	60.7	65.8	67.7	72.3	73.6	73.6	75.5	75.5	76.8	76.8	76.8	78.7	79.4
≥ 1500	30.3	60.7	65.8	67.7	72.3	73.6	73.6	75.5	75.5	76.8	76.8	76.8	78.7	79.4
≥ 1200	30.3	60.7	66.5	68.4	72.9	74.8	74.8	76.8	76.8	78.7	78.7	78.7	80.0	80.7
≥ 900	30.3	61.3	67.1	69.7	74.8	76.8	76.8	78.7	78.7	80.0	80.0	80.0	81.9	82.6
≥ 800	30.3	61.3	67.1	69.7	74.8	76.8	76.8	78.7	78.7	80.0	80.0	80.0	81.9	82.6
≥ 700	30.3	61.3	67.1	69.7	74.8	76.8	76.8	78.7	78.7	80.0	80.0	80.0	81.9	82.6
≥ 600	30.3	61.3	67.1	69.7	74.8	76.8	76.8	78.7	78.7	80.0	80.0	80.0	81.9	82.6
≥ 500	30.3	61.3	67.1	69.7	74.8	76.8	76.8	78.7	78.7	80.0	80.0	80.0	81.9	82.6
≥ 400	30.3	61.3	67.1	69.7	74.8	76.8	76.8	78.7	78.7	80.0	80.0	80.0	81.9	82.6
≥ 300	30.3	61.3	67.1	69.7	74.8	76.8	76.8	78.7	78.7	80.0	80.0	80.0	81.9	82.6
≥ 200	30.3	61.3	67.1	69.7	74.8	76.8	76.8	78.7	78.7	80.0	80.0	80.0	81.9	82.6
≥ 100	30.3	61.3	67.1	69.7	74.8	76.8	76.8	78.7	78.7	80.0	80.0	80.0	81.9	82.6
0	30.3	61.3	67.1	69.7	74.8	76.8	76.8	78.7	78.7	80.0	80.0	80.0	81.9	82.6

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

OCT  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

10  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)														
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	≥ 0
NO CEILING	27.1	46.5	48.4	49.7	52.9	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6
≥ 20000	29.0	49.7	52.9	54.2	57.4	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1
≥ 18000	29.0	49.7	52.9	54.2	57.4	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1
≥ 16000	29.0	49.7	52.9	54.2	57.4	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1
≥ 14000	29.0	49.7	53.6	54.2	58.1	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.7
≥ 12000	29.0	50.3	54.2	55.5	58.7	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4
≥ 10000	29.7	54.2	58.7	60.0	63.2	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9
≥ 9000	29.7	54.8	59.4	60.7	63.9	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5
≥ 8000	29.7	56.8	61.3	62.6	65.8	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5	66.5
≥ 7000	31.0	58.1	62.6	63.9	67.1	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7
≥ 6000	31.6	59.4	63.9	65.2	69.0	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7
≥ 5000	31.6	59.4	63.9	65.8	69.0	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7
≥ 4500	32.3	60.0	64.5	66.5	69.7	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3
≥ 4000	32.9	63.2	69.0	71.0	74.8	75.5	75.5	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1
≥ 3500	33.6	63.9	69.7	71.6	75.5	76.1	76.1	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8
≥ 3000	35.5	66.5	72.3	74.8	78.7	79.4	80.0	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
≥ 2500	35.5	67.7	73.6	76.1	80.0	80.7	81.3	82.6	82.6	82.6	82.6	82.6	82.6	82.6	82.6
≥ 2000	35.5	67.7	73.6	76.1	80.0	80.7	81.3	82.6	82.6	82.6	82.6	82.6	82.6	82.6	82.6
≥ 1800	36.1	68.4	74.2	76.8	80.7	81.3	81.9	83.2	83.2	83.2	83.2	83.2	83.2	83.2	83.2
≥ 1500	36.1	69.0	74.8	77.4	81.9	82.6	83.2	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5
≥ 1200	36.1	69.7	75.5	78.1	83.2	83.9	84.5	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
≥ 1000	36.1	69.7	76.8	80.0	85.8	87.1	87.7	89.0	89.0	89.0	89.7	89.7	89.7	89.7	89.7
≥ 900	36.1	69.7	76.8	80.7	86.5	87.7	88.4	89.7	89.7	89.7	90.3	90.3	90.3	90.3	90.3
≥ 800	36.1	69.7	76.8	80.7	86.5	87.7	89.0	90.3	90.3	90.3	91.0	91.0	91.0	91.0	91.0
≥ 700	36.1	69.7	76.8	81.3	87.1	88.4	89.7	91.0	91.0	91.0	91.6	91.6	91.6	91.6	91.6
≥ 600	36.1	70.3	77.4	81.9	87.7	89.0	90.3	91.6	91.6	91.6	92.3	92.3	92.3	92.3	92.3
≥ 500	36.1	70.3	77.4	81.9	88.4	90.3	92.3	93.6	93.6	94.2	94.8	94.8	94.8	94.8	94.8
≥ 400	36.1	70.3	77.4	81.9	88.4	90.3	92.3	94.8	95.5	96.1	96.8	96.8	96.8	96.8	96.8
≥ 300	36.1	70.3	77.4	82.6	89.0	91.0	93.6	96.1	96.8	97.4	98.1	98.1	98.1	98.1	98.1
≥ 200	36.1	70.3	77.4	82.6	89.0	91.0	93.6	96.1	96.8	98.1	99.4	99.4	99.4	99.4	99.4
≥ 100	36.1	70.3	77.4	82.6	89.0	91.0	93.6	96.1	96.8	98.1	99.4	99.4	99.4	99.4	99.4
≥ 0	36.1	70.3	77.4	82.6	89.0	91.0	93.6	96.1	96.8	98.1	99.4	99.4	99.4	99.4	99.4

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

OCT  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

13  
HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾
NO CEILING	29.0	49.0	50.3	51.0	51.6	51.6	51.6	51.6	51.6	51.6	51.6
≥ 20000	29.7	52.3	54.8	55.5	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 18000	29.7	52.3	54.8	55.5	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 16000	29.7	52.3	54.8	55.5	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 14000	29.7	52.3	54.8	55.5	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 12000	29.7	52.3	54.8	55.5	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 10000	31.0	55.5	58.1	58.7	60.0	60.7	60.7	60.7	60.7	60.7	60.7
≥ 9000	31.0	55.5	58.1	58.7	60.0	60.7	60.7	60.7	60.7	60.7	60.7
≥ 8000	31.0	58.7	61.9	62.6	63.9	64.5	64.5	64.5	64.5	64.5	64.5
≥ 7000	31.0	58.7	61.9	62.6	63.9	64.5	64.5	64.5	64.5	64.5	64.5
≥ 6000	31.0	59.4	62.6	63.2	64.5	65.2	65.2	65.2	65.2	65.2	65.2
≥ 5000	31.0	59.4	62.6	63.2	64.5	65.2	65.2	65.2	65.2	65.2	65.2
≥ 4500	31.0	61.3	65.2	65.8	67.1	67.7	67.7	67.7	67.7	67.7	67.7
≥ 4000	31.0	63.9	67.7	69.0	70.3	71.0	71.0	71.0	71.0	71.0	71.0
≥ 3500	31.6	66.5	72.9	74.8	76.1	76.8	76.8	76.8	76.8	76.8	76.8
≥ 3000	33.6	69.7	76.8	79.4	80.7	81.3	81.3	81.3	81.3	81.3	81.3
≥ 2500	33.6	71.0	78.7	81.3	82.6	83.2	83.2	83.2	83.2	83.2	83.2
≥ 2000	33.6	72.3	80.0	83.2	84.5	85.2	85.2	85.2	85.2	85.2	85.2
≥ 1800	33.6	72.3	80.0	83.2	84.5	85.2	85.2	85.2	85.2	85.2	85.2
≥ 1500	34.2	73.6	81.3	85.2	86.5	87.1	87.1	87.1	87.1	87.1	87.1
≥ 1200	34.2	73.6	81.3	85.2	86.5	87.1	87.1	87.1	87.1	87.1	87.1
≥ 1000	34.8	74.2	82.6	87.1	89.0	90.3	90.3	90.3	90.3	90.3	90.3
≥ 900	34.8	74.2	82.6	87.1	89.0	90.3	90.3	90.3	90.3	90.3	90.3
≥ 800	34.8	74.8	85.2	89.7	92.3	93.6	93.6	93.6	93.6	93.6	93.6
≥ 700	34.8	76.1	86.5	91.0	93.6	94.8	94.8	94.8	94.8	94.8	94.8
≥ 600	34.8	76.1	86.5	91.0	93.6	94.8	94.8	94.8	94.8	94.8	94.8
≥ 500	34.8	76.8	87.7	92.3	94.8	96.1	96.1	96.1	96.1	96.1	96.1
≥ 400	34.8	77.4	88.4	92.9	95.5	96.8	96.8	96.8	96.8	96.8	96.8
≥ 300	34.8	77.4	88.4	92.9	95.5	97.4	97.4	97.4	97.4	97.4	97.4
≥ 200	34.8	77.4	88.4	92.9	95.5	97.4	97.4	97.4	97.4	97.4	97.4
≥ 100	34.8	77.4	88.4	92.9	95.5	97.4	97.4	97.4	97.4	97.4	97.4
≥ 0	34.8	77.4	88.4	92.9	95.5	97.4	97.4	97.4	97.4	97.4	97.4

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

OCT  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

16  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾
NO CEILING	30.3	49.0	51.0	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
≥ 20000	34.2	56.1	58.1	58.7	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 18000	34.2	56.1	58.1	58.7	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 16000	34.2	56.1	58.1	58.7	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 14000	34.2	56.1	58.1	58.7	60.0	60.0	60.0	60.0	60.0	60.0	60.0
≥ 12000	34.2	56.8	59.4	60.0	61.3	61.3	61.3	61.3	61.3	61.3	61.3
≥ 10000	34.2	59.4	61.9	62.6	63.9	63.9	63.9	63.9	63.9	63.9	63.9
≥ 9000	34.2	59.4	61.9	62.6	63.9	63.9	63.9	63.9	63.9	63.9	63.9
≥ 8000	34.8	62.6	65.8	66.5	67.7	67.7	67.7	67.7	67.7	67.7	67.7
≥ 7000	34.8	62.6	65.8	66.5	67.7	67.7	67.7	67.7	67.7	67.7	67.7
≥ 6000	34.8	62.6	65.8	66.5	67.7	67.7	67.7	67.7	67.7	67.7	67.7
≥ 5000	35.5	63.9	67.7	68.4	69.7	69.7	69.7	69.7	69.7	69.7	69.7
≥ 4500	37.4	65.8	69.7	70.3	71.6	71.6	71.6	71.6	71.6	71.6	71.6
≥ 4000	39.4	69.7	74.2	74.8	76.1	76.1	76.1	76.1	76.1	76.1	76.1
≥ 3500	39.4	72.9	77.4	78.1	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 3000	40.0	74.2	80.0	81.3	83.2	83.2	83.2	83.2	83.2	83.2	83.2
≥ 2500	40.7	76.1	81.9	83.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2
≥ 2000	40.7	78.1	84.5	85.8	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 1800	40.7	78.1	84.5	85.8	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 1500	40.7	79.4	86.5	87.7	89.7	89.7	89.7	89.7	89.7	89.7	89.7
≥ 1200	40.7	80.7	87.7	89.7	91.6	91.6	91.6	91.6	91.6	91.6	91.6
≥ 1000	40.7	80.7	88.4	90.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3
≥ 900	40.7	81.9	89.7	91.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 800	40.7	81.9	89.7	91.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 700	40.7	81.9	89.7	91.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 600	40.7	81.9	89.7	91.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 500	40.7	81.9	89.7	91.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 400	40.7	81.9	89.7	91.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 300	40.7	81.9	89.7	91.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 200	40.7	81.9	89.7	91.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 100	40.7	81.9	89.7	91.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
0	40.7	81.9	89.7	91.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6

TOTAL NUMBER OF OBSERVATIONS

155

## CEILING VERSUS VISIBILITY

14793  
STATIONWILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

OCT  
MONTH

19

HOURS (L.S.T.)

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 0
NO CEILING	35.1	52.3	55.5	56.8	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4
≥ 20000	39.4	59.4	62.6	63.9	64.5	64.5	65.2	65.2	65.2	65.2	65.2	65.2	65.2
≥ 18000	39.4	59.4	62.6	63.9	64.5	64.5	65.2	65.2	65.2	65.2	65.2	65.2	65.2
≥ 16000	39.4	59.4	62.6	63.9	64.5	64.5	65.2	65.2	65.2	65.2	65.2	65.2	65.2
≥ 14000	39.4	60.0	63.2	64.5	65.2	65.2	65.8	65.8	65.8	65.8	65.8	65.8	65.8
≥ 12000	39.4	61.3	64.5	65.8	67.7	67.7	68.4	68.4	68.4	68.4	68.4	68.4	68.4
≥ 10000	40.7	64.5	68.4	70.3	72.3	72.3	72.9	73.6	73.6	73.6	73.6	73.6	73.6
≥ 9000	40.7	64.5	68.4	70.3	72.3	72.3	72.9	73.6	73.6	73.6	73.6	73.6	73.6
≥ 8000	40.7	65.8	69.7	71.6	74.2	74.2	74.8	75.5	75.5	75.5	75.5	75.5	75.5
≥ 7000	40.7	65.8	69.7	71.6	74.2	74.2	74.8	75.5	75.5	75.5	75.5	75.5	75.5
≥ 6000	41.3	66.5	70.3	72.3	74.8	74.8	75.5	76.1	76.1	76.1	76.1	76.1	76.1
≥ 5000	41.3	67.7	71.6	73.6	76.1	76.1	76.8	77.4	77.4	77.4	77.4	77.4	77.4
≥ 4500	41.9	68.4	72.3	74.2	76.8	76.8	77.4	78.1	78.1	78.1	78.1	78.1	78.1
≥ 4000	41.9	69.7	73.6	76.1	78.7	78.7	79.4	80.0	80.0	80.0	80.0	80.0	80.0
≥ 3500	42.6	72.9	76.8	79.4	81.9	81.9	82.6	83.2	83.2	83.2	83.2	83.2	83.2
≥ 3000	43.2	74.2	78.7	81.3	83.9	83.9	84.5	85.2	85.2	85.2	85.2	85.2	85.2
≥ 2500	44.5	76.1	80.7	83.2	85.8	85.8	86.5	87.1	87.1	87.1	87.1	87.1	87.1
≥ 2000	44.5	76.1	80.7	83.2	87.1	87.1	87.7	88.4	88.4	88.4	88.4	88.4	88.4
≥ 1800	44.5	76.1	80.7	83.2	87.1	87.1	87.7	88.4	88.4	88.4	88.4	88.4	88.4
≥ 1500	44.5	76.1	80.7	83.2	87.1	87.1	87.7	88.4	88.4	88.4	88.4	88.4	88.4
≥ 1200	45.2	77.4	82.6	86.5	90.3	90.3	91.0	91.6	91.6	91.6	91.6	91.6	91.6
≥ 1000	45.2	77.4	83.2	87.7	91.6	91.6	92.3	92.9	92.9	92.9	92.9	92.9	92.9
≥ 900	45.2	77.4	83.2	87.7	91.6	91.6	92.3	92.9	92.9	92.9	92.9	92.9	92.9
≥ 800	45.2	77.4	83.9	89.0	92.9	92.9	93.6	94.2	94.2	94.2	94.2	94.2	94.2
≥ 700	45.2	77.4	83.9	89.0	92.9	92.9	93.6	94.2	94.2	94.2	94.2	94.2	94.2
≥ 600	45.2	77.4	83.9	89.7	93.6	93.6	94.2	95.5	95.5	95.5	96.1	96.1	96.1
≥ 500	45.2	77.4	83.9	89.7	93.6	93.6	94.2	95.5	95.5	95.5	96.1	96.1	96.1
≥ 400	45.2	77.4	83.9	89.7	93.6	93.6	94.2	95.5	96.1	96.1	96.8	96.8	96.8
≥ 300	45.2	78.1	85.2	91.0	94.8	94.8	95.5	96.8	97.4	97.4	98.1	98.1	98.1
≥ 200	45.2	78.1	85.2	91.0	94.8	94.8	95.5	96.8	97.4	97.4	98.7	98.7	98.7
≥ 100	45.2	78.1	85.2	91.0	94.8	94.8	95.5	96.8	97.4	98.1	99.4	99.4	99.4
0	45.2	78.1	85.2	91.0	94.8	94.8	95.5	96.8	97.4	98.1	99.4	99.4	99.4

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

UCT

STATION NAME

YEARS

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

22

HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1	≥ ¾	≥ ½
NO CEILING	36.1	54.2	56.1	59.4	61.3	61.3	62.6	62.6	62.6	62.6	62.6
≥ 20000	40.7	59.4	61.3	64.5	66.5	66.5	67.7	67.7	67.7	67.7	67.7
≥ 18000	40.7	59.4	61.3	64.5	66.5	66.5	67.7	67.7	67.7	67.7	67.7
≥ 16000	40.7	59.4	61.3	64.5	66.5	66.5	67.7	67.7	67.7	67.7	67.7
≥ 14000	40.7	60.7	62.6	65.8	67.7	67.7	69.0	69.0	69.0	69.0	69.0
≥ 12000	40.7	60.7	62.6	65.8	67.7	67.7	69.0	69.0	69.0	69.0	69.0
≥ 10000	43.2	64.5	66.5	70.3	72.3	72.3	73.6	73.6	73.6	73.6	73.6
≥ 9000	43.2	64.5	66.5	70.3	72.3	72.3	73.6	73.6	73.6	73.6	73.6
≥ 8000	43.9	66.5	69.0	72.9	74.8	74.8	76.8	76.8	76.8	76.8	76.8
≥ 7000	43.9	66.5	69.0	72.9	74.8	74.8	76.8	76.8	76.8	76.8	76.8
≥ 6000	43.9	67.1	69.7	73.6	75.5	75.5	77.4	77.4	77.4	77.4	77.4
≥ 5000	44.5	69.0	71.6	76.1	78.1	78.1	80.7	80.7	80.7	80.7	80.7
≥ 4500	45.8	70.3	72.9	77.4	79.4	79.4	81.9	81.9	81.9	81.9	81.9
≥ 4000	46.5	71.0	73.6	78.1	80.0	80.0	82.6	82.6	82.6	82.6	82.6
≥ 3500	47.7	72.3	74.8	79.4	81.9	82.6	85.2	85.2	85.2	85.2	85.2
≥ 3000	47.7	72.3	74.8	80.0	82.6	83.2	85.2	85.8	85.8	85.8	85.8
≥ 2500	47.7	72.3	75.5	80.7	83.2	83.9	85.8	86.5	86.5	86.5	86.5
≥ 2000	47.7	72.3	75.5	80.7	83.9	84.5	87.1	87.7	87.7	87.7	87.7
≥ 1800	47.7	72.9	76.1	81.3	84.5	85.2	87.7	88.4	88.4	88.4	88.4
≥ 1500	47.7	72.9	76.8	81.9	85.2	85.8	88.4	89.0	89.0	89.0	89.0
≥ 1200	48.4	74.2	78.7	83.9	87.1	87.7	91.6	91.6	91.6	91.6	91.6
≥ 1000	48.4	75.5	80.7	85.8	89.0	89.7	93.6	93.6	93.6	93.6	93.6
≥ 900	48.4	75.5	80.7	85.8	89.0	89.7	93.6	94.2	94.2	94.2	94.2
≥ 800	48.4	75.5	80.7	85.8	89.0	89.7	93.6	94.2	94.2	94.2	94.2
≥ 700	48.4	75.5	80.7	85.8	89.0	89.7	93.6	94.2	94.2	94.2	94.2
≥ 600	48.4	75.5	80.7	85.8	89.0	90.3	93.6	94.2	94.2	94.2	94.2
≥ 500	48.4	75.5	80.7	86.5	90.3	91.6	95.5	96.1	96.1	96.1	96.1
≥ 400	48.4	75.5	80.7	86.5	90.3	91.6	95.5	96.1	96.1	96.1	96.1
≥ 300	48.4	75.5	80.7	86.5	90.3	91.6	95.5	96.8	96.8	96.8	96.8
≥ 200	48.4	75.5	80.7	86.5	90.3	91.6	95.5	97.4	97.4	97.4	97.4
≥ 100	48.4	75.5	80.7	86.5	90.3	91.6	95.5	97.4	97.4	97.4	97.4
0	48.4	75.5	80.7	86.5	90.3	91.6	95.5	97.4	97.4	97.4	97.4

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

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STATION NAME

YEARS

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

ALL

HOURLY (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	31.5	48.4	50.4	51.7	53.4	53.7	54.0	54.4	54.4	54.8	55.0	55.0	55.0	55.2
≥ 20000	33.6	52.7	55.1	56.4	58.5	59.0	59.4	59.8	59.8	60.1	60.4	60.4	60.5	60.7
≥ 18000	33.6	52.7	55.1	56.4	58.5	59.0	59.4	59.8	59.8	60.1	60.4	60.4	60.5	60.7
≥ 16000	33.6	52.7	55.1	56.4	58.5	59.0	59.4	59.8	59.8	60.1	60.4	60.4	60.5	60.7
≥ 14000	33.6	53.1	55.6	56.9	59.0	59.5	59.9	60.3	60.3	60.7	61.0	61.0	61.1	61.3
≥ 12000	33.7	53.6	56.2	57.6	59.8	60.3	60.7	61.1	61.1	61.5	61.8	61.8	61.9	62.1
≥ 10000	35.2	57.3	60.2	61.8	64.1	64.7	65.1	65.6	65.6	65.9	66.2	66.2	66.3	66.5
≥ 9000	35.2	57.3	60.3	61.9	64.3	64.8	65.2	65.7	65.7	66.1	66.4	66.4	66.5	66.7
≥ 8000	36.3	60.2	63.7	65.3	67.9	68.6	69.0	69.6	69.6	69.9	70.2	70.2	70.3	70.6
≥ 7000	36.5	60.4	64.0	65.6	68.2	68.8	69.4	69.9	69.9	70.2	70.6	70.6	70.7	70.9
≥ 6000	36.7	61.0	64.5	66.2	68.8	69.4	70.0	70.6	70.6	70.9	71.2	71.2	71.3	71.5
≥ 5000	36.9	61.9	65.6	67.3	69.9	70.6	71.2	71.8	71.8	72.1	72.4	72.5	72.5	72.7
≥ 4500	37.4	62.9	66.7	68.5	71.1	71.8	72.4	73.0	73.0	73.3	73.6	73.8	74.0	74.0
≥ 4000	38.2	65.1	69.1	71.1	73.8	74.4	75.1	75.7	75.7	76.2	76.6	76.6	76.8	77.0
≥ 3500	38.7	66.7	71.1	73.2	76.0	76.7	77.3	78.0	78.0	78.5	78.9	79.0	79.0	79.3
≥ 3000	39.6	68.2	72.3	75.2	78.2	79.0	79.8	80.5	80.5	81.1	81.5	81.6	81.6	81.9
≥ 2500	40.1	69.2	74.2	76.7	79.7	80.4	81.2	81.9	81.9	82.5	82.9	83.1	83.1	83.3
≥ 2000	40.2	69.8	74.9	77.6	80.8	81.5	82.4	83.2	83.2	83.9	84.3	84.4	84.4	84.7
≥ 1800	40.4	70.1	75.2	77.9	81.1	81.9	82.7	83.5	83.6	84.2	84.6	84.8	84.8	85.0
≥ 1500	40.6	70.7	76.1	79.0	82.3	83.2	84.1	84.8	84.9	85.7	86.1	86.3	86.3	86.5
≥ 1200	40.7	71.5	77.1	80.2	83.8	84.8	85.7	86.5	86.5	87.3	87.7	87.9	88.1	88.2
≥ 1000	40.9	71.9	77.3	81.5	85.3	86.5	87.5	88.2	88.5	89.3	89.8	90.0	90.0	90.2
≥ 900	40.9	72.1	78.2	81.5	85.8	87.0	88.2	88.9	89.1	89.9	90.5	90.7	90.7	90.9
≥ 800	40.9	72.1	78.5	82.3	86.2	87.5	89.0	89.8	90.1	90.9	91.8	91.9	91.9	92.3
≥ 700	40.9	72.3	78.6	82.5	86.8	88.2	89.7	90.5	90.7	91.5	92.4	92.6	92.6	92.9
≥ 600	40.9	72.3	78.7	82.7	87.0	88.6	90.2	91.1	91.4	92.3	93.2	93.4	93.4	93.8
≥ 500	40.9	72.4	79.0	83.1	87.6	89.3	91.1	92.1	92.3	93.3	94.4	94.8	94.8	95.2
≥ 400	40.9	72.5	79.1	83.2	87.8	89.6	91.6	92.8	93.2	94.4	95.5	95.9	95.9	96.4
≥ 300	40.9	72.7	79.4	83.6	88.2	90.2	92.6	94.0	94.4	95.7	96.8	97.3	97.3	97.7
≥ 200	40.9	72.7	79.4	83.6	88.2	90.2	92.6	94.2	94.6	96.1	97.3	97.7	98.0	98.5
≥ 100	40.9	72.7	79.4	83.6	88.2	90.2	92.6	94.2	94.6	96.1	97.4	97.6	98.1	98.8
0	40.9	72.7	79.4	83.6	88.2	90.2	92.6	94.2	94.6	96.2	97.7	97.8	98.6	99.0

TOTAL NUMBER OF OBSERVATIONS

1240

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

NDV

STATION NAME

YEARS

NORTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

01

HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)											
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½
NO CEILING	35.0	49.3	50.0	50.7	50.7	51.3	52.0	52.0	52.7	52.7	52.7	52.7
≥ 20000	38.7	52.0	52.7	53.3	53.3	54.0	54.7	54.7	55.3	55.3	55.3	56.0
≥ 18000	38.7	52.0	52.7	53.3	53.3	54.0	54.7	54.7	55.3	55.3	55.3	56.0
≥ 16000	38.7	52.0	52.7	53.3	53.3	54.0	54.7	54.7	55.3	55.3	55.3	56.0
≥ 14000	39.3	53.3	54.0	54.7	54.7	55.3	56.0	56.0	56.7	56.7	57.3	57.3
≥ 12000	39.3	54.7	55.3	56.0	56.0	56.7	57.3	57.3	58.0	58.0	58.7	58.7
≥ 10000	43.3	60.0	60.7	61.3	61.3	62.0	62.7	62.7	63.3	63.3	64.0	64.0
≥ 9000	43.3	60.0	60.7	61.3	61.3	62.0	62.7	62.7	63.3	63.3	64.0	64.0
≥ 8000	46.0	64.7	65.3	66.0	66.0	66.7	67.3	67.3	68.0	68.0	68.7	68.7
≥ 7000	46.0	65.3	66.0	66.7	66.7	67.3	68.0	68.0	68.7	68.7	69.3	69.3
≥ 6000	46.7	66.7	67.3	68.0	68.0	68.7	69.3	69.3	70.0	70.0	70.7	70.7
≥ 5000	48.0	68.7	69.3	70.0	70.0	70.7	71.3	71.3	72.0	72.0	72.7	72.7
≥ 4500	48.0	68.7	69.3	70.7	70.7	71.3	72.0	72.0	72.7	72.7	73.3	73.3
≥ 4000	48.7	71.3	72.0	73.3	74.0	74.7	75.3	75.3	76.0	76.0	76.7	76.7
≥ 3500	49.3	72.7	73.3	74.7	75.3	76.0	76.7	76.7	77.3	77.3	78.0	78.0
≥ 3000	52.0	75.3	76.0	78.0	78.7	79.3	80.7	80.7	81.3	81.3	82.0	82.0
≥ 2500	52.0	76.0	76.7	78.7	79.3	80.0	81.3	81.3	82.0	82.0	82.7	82.7
≥ 2000	53.3	78.0	78.7	80.7	81.3	82.0	83.3	83.3	84.0	84.0	84.7	84.7
≥ 1800	53.3	78.0	79.3	81.3	82.7	83.3	84.7	85.3	86.0	86.0	86.7	86.7
≥ 1500	53.3	78.0	79.3	81.3	82.7	83.3	84.7	85.3	86.0	86.0	86.7	86.7
≥ 1200	53.3	78.0	79.3	81.3	83.3	84.0	85.3	86.0	86.7	86.7	87.3	87.3
≥ 1000	53.3	79.3	81.3	84.0	86.0	86.7	88.0	88.7	89.3	89.3	90.0	90.0
≥ 900	53.3	79.3	81.3	84.0	86.0	86.7	88.0	88.7	89.3	89.3	90.0	90.0
≥ 800	53.3	79.3	81.3	84.0	86.0	86.7	88.0	88.7	89.3	89.3	90.0	90.0
≥ 700	53.3	79.3	81.3	84.0	86.0	86.7	88.0	88.7	89.3	89.3	90.0	90.0
≥ 600	53.3	79.3	82.0	84.7	86.7	87.3	89.3	90.7	91.3	91.3	92.0	92.0
≥ 500	53.3	79.3	82.0	84.7	87.3	88.0	90.0	91.3	91.3	92.0	92.7	92.7
≥ 400	53.3	79.3	82.0	84.7	88.0	88.7	91.3	92.7	93.3	93.3	94.0	94.0
≥ 300	53.3	79.3	82.0	84.7	88.0	88.7	92.0	93.3	94.7	94.7	95.3	95.3
≥ 200	53.3	79.3	82.0	84.7	88.0	88.7	92.7	95.3	96.7	96.7	97.3	97.3
≥ 100	53.3	79.3	82.0	84.7	88.0	88.7	92.7	95.3	96.7	96.7	97.3	97.3
0	53.3	79.3	82.0	84.7	88.0	88.7	92.7	95.3	96.7	96.7	97.3	97.3

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEAR

NOV  
MONTH

04  
HOURS (L.S.T.)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1	≥ ¾	≥ 5/16	≥ ¼	≥ 0
NO CEILING	34.7	52.0	53.3	53.3	54.0	54.0	54.0	54.0	54.7	54.7	54.7	54.7	56.0
≥ 20000	35.3	53.3	54.7	54.7	55.3	55.3	55.3	55.3	56.0	56.0	56.0	56.0	57.3
≥ 18000	35.3	53.3	54.7	54.7	55.3	55.3	55.3	55.3	56.0	56.0	56.0	56.0	57.3
≥ 16000	35.3	53.3	54.7	54.7	55.3	55.3	55.3	55.3	56.0	56.0	56.0	56.0	57.3
≥ 14000	35.3	53.3	54.7	54.7	55.3	55.3	55.3	55.3	56.0	56.0	56.0	56.0	57.3
≥ 12000	35.3	53.3	54.7	54.7	55.3	55.3	55.3	55.3	56.0	56.0	56.0	56.0	57.3
≥ 10000	39.3	59.3	60.7	60.7	61.3	61.3	61.3	61.3	62.0	62.0	62.0	62.0	64.0
≥ 9000	39.3	59.3	60.7	60.7	61.3	61.3	61.3	61.3	62.0	62.0	62.0	62.0	64.0
≥ 8000	42.0	64.0	65.3	65.3	66.0	66.0	66.0	66.0	66.7	67.3	67.3	67.3	68.7
≥ 7000	42.7	64.7	66.0	66.0	66.7	66.7	66.7	66.7	67.3	68.0	68.0	68.0	69.3
≥ 6000	44.7	68.0	69.3	69.3	70.0	70.0	70.0	70.0	70.7	71.3	71.3	71.3	72.7
≥ 5000	45.3	70.0	71.3	71.3	72.0	72.0	72.0	72.0	72.7	73.3	73.3	73.3	75.3
≥ 4500	45.0	72.0	73.3	73.3	74.0	74.0	74.0	74.0	74.7	75.3	75.3	75.3	77.3
≥ 4000	45.7	74.0	75.3	75.3	76.0	76.0	76.0	76.0	76.7	77.3	77.3	77.3	79.3
≥ 3500	46.7	74.0	75.3	75.3	76.7	76.7	76.7	76.7	77.3	78.0	78.0	78.0	80.0
≥ 3000	48.7	76.0	78.0	78.0	79.3	79.3	79.3	79.3	80.7	81.3	81.3	81.3	83.3
≥ 2500	48.7	76.0	78.0	78.0	79.3	79.3	79.3	79.3	80.7	81.3	81.3	81.3	83.3
≥ 2000	49.3	77.3	79.3	79.3	80.7	80.7	80.7	80.7	81.3	82.0	82.0	82.0	83.3
≥ 1800	50.0	78.0	80.0	80.0	81.3	81.3	81.3	81.3	82.0	82.7	82.7	82.7	83.3
≥ 1500	50.0	78.0	80.7	80.7	82.0	82.0	82.0	82.0	82.7	83.3	83.3	83.3	86.0
≥ 1200	50.0	78.0	80.7	80.7	82.7	82.7	82.7	82.7	83.3	84.0	84.0	84.0	86.0
≥ 1000	50.0	78.7	81.3	81.3	83.3	83.3	83.3	83.3	84.0	84.7	84.7	84.7	86.7
≥ 900	50.0	78.7	81.3	81.3	83.3	83.3	83.3	83.3	84.0	84.7	84.7	84.7	86.7
≥ 800	50.0	78.7	82.0	82.0	84.0	84.0	84.0	84.0	84.7	85.3	85.3	85.3	87.3
≥ 700	50.0	79.3	82.7	82.7	84.7	84.7	84.7	84.7	85.3	86.0	86.0	86.0	88.0
≥ 600	50.0	79.3	82.7	82.7	84.7	84.7	84.7	84.7	85.3	86.0	86.0	86.0	88.0
≥ 500	50.0	79.3	83.3	83.3	85.3	85.3	85.3	85.3	86.0	86.7	86.7	86.7	88.7
≥ 400	50.0	79.3	83.3	83.3	85.3	85.3	85.3	85.3	86.0	86.7	86.7	86.7	88.7
≥ 300	50.0	79.3	83.3	83.3	85.3	85.3	85.3	85.3	86.0	86.7	86.7	86.7	88.7
≥ 200	50.0	79.3	83.3	83.3	85.3	85.3	85.3	85.3	86.0	86.7	86.7	86.7	88.7
≥ 100	50.0	79.3	83.3	83.3	85.3	85.3	85.3	85.3	86.0	86.7	86.7	86.7	88.7
≥ 0	50.0	79.3	83.3	83.3	85.3	85.3	85.3	85.3	86.0	86.7	86.7	86.7	88.7

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

NOV

STATION NAME

YEARS

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

07  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	22.7	40.0	44.0	45.3	46.0	46.0	46.7	47.3	48.0	48.0	48.0	48.0	48.7
≥ 20000	24.7	43.3	48.0	49.3	50.7	50.7	51.3	52.0	53.3	53.3	53.3	53.3	54.0
≥ 18000	24.7	43.3	48.0	49.3	50.7	50.7	51.3	52.0	53.3	53.3	53.3	53.3	54.0
≥ 16000	24.7	43.3	48.0	49.3	50.7	50.7	51.3	52.0	53.3	53.3	53.3	53.3	54.0
≥ 14000	25.3	44.0	49.3	50.7	52.0	52.0	52.7	53.3	54.7	54.7	54.7	54.7	55.3
≥ 12000	25.3	46.0	51.3	53.3	55.3	55.3	56.0	56.7	58.0	58.0	58.0	58.0	58.7
≥ 10000	28.7	51.3	56.7	58.7	60.7	60.7	61.3	62.0	63.3	63.3	63.3	63.3	64.0
≥ 9000	28.7	51.3	56.7	58.7	60.7	60.7	61.3	62.0	63.3	63.3	63.3	63.3	64.0
≥ 8000	29.3	52.7	58.0	60.0	62.7	62.7	63.3	64.0	65.3	65.3	65.3	65.3	66.0
≥ 7000	29.3	53.3	58.7	60.7	63.3	63.3	64.0	64.7	66.0	66.0	66.0	66.0	66.7
≥ 6000	29.3	54.0	59.3	61.3	64.0	64.0	64.7	65.3	66.7	66.7	66.7	66.7	67.3
≥ 5000	29.3	54.7	60.0	62.0	64.7	64.7	65.3	66.0	67.3	67.3	67.3	67.3	68.0
≥ 4500	30.0	55.3	60.7	62.7	65.3	65.3	66.0	66.7	68.0	68.0	68.0	68.0	68.7
≥ 4000	30.7	56.7	62.0	64.0	66.7	66.7	67.3	68.0	69.3	69.3	69.3	69.3	70.0
≥ 3500	31.3	58.0	63.3	65.3	68.0	68.0	68.7	69.3	70.7	70.7	70.7	70.7	71.3
≥ 3000	33.3	60.0	66.0	68.0	70.7	71.3	73.3	74.0	75.3	75.3	75.3	75.3	76.7
≥ 2500	33.3	62.7	68.7	71.3	74.0	75.3	77.3	78.0	79.3	79.3	79.3	79.3	80.7
≥ 2000	34.7	64.0	70.0	73.3	76.0	77.3	79.3	80.0	81.3	81.3	81.3	81.3	82.7
≥ 1800	34.7	64.0	70.0	73.3	76.0	77.3	79.3	80.0	81.3	81.3	81.3	81.3	82.7
≥ 1500	35.3	65.3	72.0	75.3	78.0	79.3	81.3	82.0	83.3	83.3	83.3	83.3	84.7
≥ 1200	35.3	66.0	72.7	76.0	79.3	81.3	83.3	84.0	85.3	85.3	85.3	85.3	86.7
≥ 1000	35.3	66.0	72.7	76.0	79.3	81.3	83.3	84.0	85.3	85.3	85.3	85.3	86.7
≥ 900	35.3	66.0	72.7	76.0	79.3	81.3	83.3	84.0	85.3	85.3	85.3	85.3	86.7
≥ 800	35.3	66.0	72.7	76.0	79.3	81.3	83.3	84.0	85.3	85.3	85.3	85.3	86.7
≥ 700	35.3	66.0	72.7	76.0	79.3	81.3	83.3	84.0	85.3	85.3	85.3	85.3	86.7
≥ 600	35.3	66.0	72.7	76.0	79.3	81.3	83.3	84.0	85.3	85.3	85.3	85.3	86.7
≥ 500	35.3	66.0	72.7	76.0	79.3	81.3	83.3	84.0	85.3	85.3	85.3	85.3	86.7
≥ 400	35.3	66.0	72.7	76.0	79.3	81.3	83.3	84.0	85.3	85.3	85.3	85.3	86.7
≥ 300	35.3	66.0	72.7	76.0	79.3	81.3	83.3	84.0	85.3	85.3	85.3	85.3	86.7
≥ 200	35.3	66.0	72.7	76.0	79.3	81.3	83.3	84.0	85.3	85.3	85.3	85.3	86.7
≥ 100	35.3	66.0	72.7	76.0	79.3	81.3	83.3	84.0	85.3	85.3	85.3	85.3	86.7
0	35.3	66.0	72.7	76.0	79.3	81.3	83.3	84.0	85.3	85.3	85.3	85.3	86.7

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEAR

NOV  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

10  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾
NO CEILING	22.7	42.7	46.0	46.0	46.0	46.0	46.7	46.7	46.7	46.7	46.7
≥ 20000	23.3	48.7	52.0	52.0	52.7	52.7	53.3	53.3	53.3	54.0	54.0
≥ 18000	23.3	48.7	52.0	52.0	52.7	52.7	53.3	53.3	53.3	54.0	54.0
≥ 16000	23.3	48.7	52.0	52.0	52.7	52.7	53.3	53.3	53.3	54.0	54.0
≥ 14000	23.3	48.7	52.0	52.0	52.7	52.7	53.3	53.3	53.3	54.0	54.0
≥ 12000	23.3	50.0	54.0	54.7	55.3	56.0	56.7	56.7	57.3	57.3	57.3
≥ 10000	24.0	55.3	60.0	60.7	61.3	62.0	62.7	62.7	63.3	63.3	63.3
≥ 9000	24.0	55.3	60.0	60.7	61.3	62.0	62.7	62.7	63.3	63.3	63.3
≥ 8000	24.0	57.3	62.0	62.7	63.3	64.0	64.7	64.7	65.3	65.3	65.3
≥ 7000	24.0	58.0	62.7	63.3	64.7	65.3	66.0	66.0	66.7	66.7	66.7
≥ 6000	24.0	58.7	63.3	64.0	65.3	66.0	66.7	66.7	67.3	67.3	67.3
≥ 5000	24.0	60.7	66.0	66.7	68.0	68.7	69.3	69.3	70.0	70.0	70.0
≥ 4500	24.7	62.7	68.0	68.7	70.0	70.7	71.3	71.3	72.0	72.0	72.0
≥ 4000	25.3	64.7	70.0	70.7	72.0	72.7	73.3	73.3	74.0	74.0	74.0
≥ 3500	25.0	66.0	71.3	72.0	73.3	74.0	74.7	74.7	75.3	75.3	75.3
≥ 3000	26.7	67.3	73.3	75.3	76.7	77.3	78.0	78.0	78.7	78.7	78.7
≥ 2500	26.7	68.0	74.0	77.3	78.7	79.3	80.0	80.0	80.7	80.7	80.7
≥ 2000	27.3	69.3	75.3	78.7	80.7	82.0	82.7	82.7	83.3	83.3	83.3
≥ 1800	27.3	69.3	75.3	78.7	80.7	82.0	82.7	82.7	83.3	83.3	83.3
≥ 1500	28.7	70.7	76.7	80.7	82.7	84.0	84.7	84.7	85.3	85.3	85.3
≥ 1200	28.7	70.7	76.7	80.7	82.7	84.0	84.7	84.7	85.3	85.3	85.3
≥ 1000	28.7	70.7	77.3	82.0	84.0	85.3	86.7	86.7	87.3	87.3	87.3
≥ 900	28.7	70.7	77.3	82.0	84.0	86.0	87.3	87.3	88.0	88.0	88.0
≥ 800	28.7	71.3	78.7	84.0	86.0	88.0	90.7	90.7	91.3	91.3	91.3
≥ 700	28.7	71.3	78.7	84.0	86.0	88.0	90.7	90.7	91.3	91.3	91.3
≥ 600	28.7	72.0	79.3	84.7	86.7	88.7	91.3	91.3	92.7	92.7	92.7
≥ 500	28.7	72.0	80.0	84.3	87.3	89.3	92.0	92.7	94.7	94.7	94.7
≥ 400	28.7	72.0	80.0	85.3	87.3	89.3	92.0	92.7	94.7	94.7	94.7
≥ 300	28.7	72.0	80.0	85.3	87.3	89.3	92.7	93.3	95.3	95.3	95.3
≥ 200	28.7	72.0	80.0	85.3	87.3	89.3	92.7	93.3	95.3	95.3	95.3
≥ 100	28.7	72.0	80.0	85.3	87.3	89.3	92.7	93.3	95.3	95.3	95.3
0	28.7	72.0	80.0	85.3	87.3	89.3	92.7	93.3	95.3	95.3	95.3

150

TOTAL NUMBER OF OBSERVATIONS

DIRNAVOCEANMET SMOS

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

## CEILING VERSUS VISIBILITY

14793  
STATIONWILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

NOV  
MONTHPERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)13  
HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 0
NO CEILING	20.0	39.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3
≥ 20000	21.3	44.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0
≥ 18000	21.3	44.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0
≥ 16000	21.3	44.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0
≥ 14000	21.3	44.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0
≥ 12000	21.3	46.0	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
≥ 10000	22.7	53.3	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 9000	22.7	53.3	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 8000	23.3	58.0	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7
≥ 7000	23.3	59.3	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0
≥ 6000	24.7	62.7	65.3	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0
≥ 5000	24.7	62.7	65.3	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0
≥ 4500	24.7	64.7	67.3	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
≥ 4000	25.3	66.7	69.3	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
≥ 3500	26.0	70.0	72.7	73.3	73.3	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0
≥ 3000	26.7	74.0	76.7	78.0	78.0	79.3	79.3	79.3	79.3	79.3	79.3	79.3	79.3
≥ 2500	28.0	76.7	79.3	80.7	80.7	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0
≥ 2000	28.7	78.0	81.3	84.0	84.0	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3
≥ 1800	29.3	79.3	82.7	85.3	85.3	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7
≥ 1500	29.3	79.3	83.3	86.0	86.0	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
≥ 1200	29.3	80.7	84.7	87.3	88.0	89.3	89.3	89.3	89.3	89.3	89.3	89.3	89.3
≥ 1000	29.3	81.3	86.7	89.3	90.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0
≥ 900	29.3	81.3	87.3	90.0	90.7	92.7	93.3	93.3	93.3	93.3	93.3	93.3	93.3
≥ 800	29.3	81.3	87.3	90.0	90.7	92.7	93.3	93.3	93.3	93.3	93.3	93.3	93.3
≥ 700	29.3	82.0	88.0	90.7	91.3	93.3	94.0	94.0	94.0	94.0	94.0	94.0	94.0
≥ 600	29.3	82.0	88.0	90.7	92.0	94.0	94.0	95.3	95.3	95.3	95.3	95.3	95.3
≥ 500	29.3	82.0	88.0	90.7	92.7	94.7	95.3	96.7	96.7	96.7	96.7	96.7	96.7
≥ 400	29.3	82.7	88.7	91.3	93.3	95.3	96.7	98.0	98.0	98.0	98.0	98.0	98.0
≥ 300	29.3	82.7	88.7	91.3	93.3	95.3	96.7	98.0	98.0	98.0	98.0	98.0	98.0
≥ 200	29.3	82.7	88.7	91.3	93.3	95.3	96.7	98.0	98.0	98.0	98.0	98.0	98.0
≥ 100	29.3	82.7	88.7	91.3	93.3	95.3	96.7	98.0	98.0	98.0	98.0	98.0	98.0
≥ 0	29.3	82.7	88.7	91.3	93.3	95.3	96.7	98.0	98.0	98.0	98.0	98.0	98.0

TOTAL NUMBER OF OBSERVATIONS

150

## CEILING VERSUS VISIBILITY

14793  
STATIONWILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

NOV  
MONTH

16

HOURS (L.S.T.)

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)														
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	≥ 0
NO CEILING	18.7	44.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0
≥ 20000	20.0	51.3	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
≥ 18000	20.0	51.3	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
≥ 16000	20.0	51.3	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
≥ 14000	20.0	52.0	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
≥ 12000	20.0	53.3	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7	56.7
≥ 10000	20.7	58.7	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0
≥ 9000	20.7	58.7	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0
≥ 8000	21.3	63.3	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7
≥ 7000	21.3	64.0	67.3	67.3	67.3	67.3	67.3	67.3	67.3	67.3	67.3	67.3	67.3	67.3	67.3
≥ 6000	21.3	64.7	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
≥ 5000	21.3	65.3	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7	68.7
≥ 4500	21.3	65.3	68.7	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3
≥ 4000	22.0	66.7	70.7	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3
≥ 3500	24.0	70.7	74.7	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3
≥ 3000	24.0	73.3	78.0	78.7	78.7	79.3	79.3	79.3	79.3	79.3	80.0	80.0	80.0	80.0	80.0
≥ 2500	24.0	76.7	81.3	82.0	82.0	82.7	82.7	82.7	82.7	82.7	83.3	83.3	83.3	83.3	83.3
≥ 2000	24.7	78.7	83.3	84.0	84.0	84.7	84.7	84.7	84.7	84.7	85.3	85.3	85.3	85.3	85.3
≥ 1800	24.7	78.7	83.3	84.0	84.0	84.7	84.7	84.7	84.7	84.7	85.3	85.3	85.3	85.3	85.3
≥ 1500	24.7	78.7	86.0	86.7	86.7	87.3	87.3	87.3	87.3	87.3	88.0	88.0	88.0	88.0	88.0
≥ 1200	24.7	79.3	86.7	87.3	87.3	88.0	88.0	88.0	88.0	88.0	88.7	88.7	88.7	88.7	88.7
≥ 1000	25.3	80.7	88.7	89.3	90.0	91.3	91.3	91.3	91.3	91.3	92.0	92.0	92.0	92.0	92.0
≥ 900	25.3	81.3	89.3	90.0	90.7	92.0	92.0	92.0	92.0	92.0	92.7	92.7	92.7	92.7	92.7
≥ 800	25.3	81.3	90.0	90.7	91.3	92.7	92.7	92.7	92.7	92.7	93.3	93.3	93.3	93.3	93.3
≥ 700	25.3	81.3	90.0	90.7	91.3	92.7	92.7	92.7	92.7	92.7	93.3	93.3	93.3	93.3	93.3
≥ 600	25.3	81.3	90.0	90.7	91.3	92.7	93.3	94.0	94.0	94.0	94.7	94.7	94.7	94.7	94.7
≥ 500	25.3	81.3	90.0	90.7	91.3	92.7	93.3	94.7	94.7	94.7	95.3	95.3	95.3	95.3	95.3
≥ 400	25.3	81.3	90.0	91.3	92.0	93.3	94.7	96.0	96.0	96.0	96.7	96.7	96.7	96.7	96.7
≥ 300	25.3	81.3	90.0	91.3	92.0	93.3	95.3	96.7	96.7	96.7	97.3	97.3	97.3	97.3	97.3
≥ 200	25.3	81.3	90.0	91.3	92.0	94.0	96.0	97.3	97.3	97.3	98.0	98.0	98.0	98.0	98.0
≥ 100	25.3	81.3	90.0	91.3	92.0	94.0	96.0	97.3	97.3	97.3	98.7	98.7	98.7	98.7	98.7
≥ 0	25.3	81.3	90.0	91.3	92.0	94.0	96.0	97.3	97.3	97.3	98.7	98.7	98.7	98.7	98.7

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

NOV  
MONTH

19  
YEARS

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 0
NO CEILING	34.7	52.7	54.0	55.3	55.3	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
≥ 20000	40.0	60.7	62.0	63.3	63.3	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
≥ 18000	40.0	60.7	62.0	63.3	63.3	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
≥ 16000	40.0	60.7	62.0	63.3	63.3	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
≥ 14000	40.0	60.7	62.0	63.3	63.3	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
≥ 12000	42.0	64.7	66.0	67.3	67.3	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
≥ 10000	42.0	67.3	68.7	70.0	70.7	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3
≥ 9000	42.0	67.3	68.7	70.0	70.7	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3
≥ 8000	44.0	70.7	72.0	73.3	74.0	74.7	74.7	74.7	74.7	74.7	74.7	74.7	74.7
≥ 7000	44.0	70.7	72.0	73.3	74.0	74.7	74.7	74.7	74.7	74.7	74.7	74.7	74.7
≥ 6000	44.0	70.7	72.0	73.3	74.0	74.7	74.7	74.7	74.7	74.7	74.7	74.7	74.7
≥ 5000	44.7	71.3	72.7	74.0	74.7	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3
≥ 4500	46.0	73.3	74.7	76.0	76.7	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3
≥ 4000	46.0	74.0	75.3	76.7	77.3	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
≥ 3500	46.7	75.3	76.7	78.0	78.7	79.3	79.3	79.3	79.3	79.3	79.3	79.3	79.3
≥ 3000	47.3	78.7	80.0	82.0	82.7	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3
≥ 2500	48.7	80.7	82.0	84.0	84.7	85.3	85.3	85.3	85.3	85.3	85.3	85.3	85.3
≥ 2000	49.7	82.7	84.0	86.0	86.7	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
≥ 1800	49.3	82.7	84.0	86.0	86.7	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
≥ 1500	50.0	83.3	85.3	87.3	88.0	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
≥ 1200	50.0	83.3	85.3	87.3	88.0	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
≥ 1000	50.0	84.0	86.0	88.0	88.7	90.0	90.7	90.7	90.7	90.7	90.7	90.7	90.7
≥ 900	50.0	84.0	86.0	88.0	88.7	90.7	91.3	91.3	91.3	91.3	91.3	91.3	91.3
≥ 800	50.0	84.7	86.7	88.7	89.3	91.3	92.0	92.0	92.0	92.0	92.0	92.0	92.0
≥ 700	50.0	84.7	86.7	88.7	89.3	91.3	92.0	92.0	92.0	92.0	92.0	92.0	92.0
≥ 600	50.0	85.3	87.3	89.3	90.0	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7
≥ 500	50.0	85.3	87.3	89.3	90.0	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7
≥ 400	50.0	85.3	87.3	89.3	90.0	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7
≥ 300	50.0	85.3	87.3	89.3	90.0	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7
≥ 200	50.0	85.3	87.3	89.3	90.0	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7
≥ 100	50.0	85.3	87.3	89.3	90.0	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7
0	50.0	85.3	87.3	89.3	90.0	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7

TOTAL NUMBER OF OBSERVATIONS

150

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

NOV  
MONTH

22  
HOURS (LST)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	39.3	53.3	53.3	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.7	54.7	54.7
≥ 20000	41.3	58.0	58.7	59.3	59.3	59.3	59.3	59.3	59.3	59.3	60.0	60.0	60.0
18000	41.3	58.0	58.7	59.3	59.3	59.3	59.3	59.3	59.3	59.3	60.0	60.0	60.0
≥ 16000	41.3	58.0	58.7	59.3	59.3	59.3	59.3	59.3	59.3	59.3	60.0	60.0	60.0
14000	42.7	60.0	60.7	61.3	61.3	61.3	61.3	61.3	61.3	61.3	62.0	62.0	62.0
≥ 12000	43.3	61.3	62.0	62.7	62.7	62.7	62.7	62.7	62.7	62.7	63.3	63.3	63.3
10000	45.0	64.7	65.3	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.7	66.7	66.7
≥ 9000	46.0	64.7	65.3	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.7	66.7	66.7
8000	47.3	66.7	67.3	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.7	68.7	68.7
≥ 7000	48.7	68.0	68.7	69.3	69.3	69.3	69.3	69.3	69.3	69.3	70.0	70.0	70.0
6000	48.7	68.0	68.7	69.3	69.3	69.3	69.3	69.3	69.3	69.3	70.0	70.0	70.0
≥ 5000	49.3	68.7	70.0	70.7	71.3	71.3	71.3	71.3	71.3	71.3	72.0	72.0	72.0
4500	52.7	72.7	74.0	75.3	76.0	76.0	76.0	76.0	76.0	76.0	76.7	76.7	76.7
≥ 4000	53.3	74.7	76.0	76.0	78.7	78.7	78.7	78.7	78.7	78.7	79.3	79.3	79.3
3500	54.0	75.3	76.7	77.3	79.3	79.3	79.3	79.3	79.3	79.3	80.0	80.0	80.0
≥ 3000	54.7	77.3	78.7	80.7	81.3	81.3	81.3	81.3	81.3	81.3	82.0	82.0	82.7
2500	54.7	78.7	80.0	82.0	82.7	82.7	82.7	82.7	82.7	82.7	83.3	83.3	84.0
≥ 2000	55.3	79.3	80.7	83.3	84.0	84.0	84.0	84.0	84.0	84.0	84.7	84.7	85.3
1800	55.3	79.3	80.7	83.3	84.0	84.0	84.0	84.0	84.0	84.0	84.7	84.7	85.3
≥ 1500	55.3	79.3	80.7	84.0	84.7	84.7	84.7	84.7	84.7	84.7	85.3	85.3	86.0
1200	56.7	81.3	83.3	84.7	87.3	87.3	87.3	87.3	87.3	87.3	88.0	88.0	88.7
≥ 1000	56.7	81.3	83.3	87.3	88.7	88.7	88.7	88.7	88.7	88.7	89.3	89.3	90.0
900	56.7	81.3	83.3	87.3	88.7	88.7	88.7	88.7	88.7	88.7	89.3	89.3	90.0
800	56.7	81.3	83.3	88.0	89.3	89.3	89.3	89.3	89.3	89.3	90.0	90.0	91.3
700	56.7	81.3	83.3	88.0	89.3	89.3	89.3	89.3	89.3	89.3	90.0	90.0	91.3
≥ 600	56.7	81.3	83.3	88.0	89.3	89.3	89.3	89.3	89.3	89.3	90.0	90.0	91.3
500	56.7	81.3	83.3	88.0	89.3	89.3	89.3	89.3	89.3	89.3	90.0	90.0	91.3
400	56.7	81.3	83.3	88.0	89.3	89.3	89.3	89.3	89.3	89.3	90.0	90.0	91.3
300	56.7	81.3	83.3	88.0	89.3	89.3	89.3	89.3	89.3	89.3	90.0	90.0	91.3
≥ 200	56.7	81.3	83.3	88.0	89.3	89.3	89.3	89.3	89.3	89.3	90.0	90.0	91.3
100	56.7	81.3	83.3	88.0	89.3	89.3	89.3	89.3	89.3	89.3	90.0	90.0	91.3
0	56.7	81.3	83.3	88.0	89.3	89.3	89.3	89.3	89.3	89.3	90.0	90.0	91.3

TOTAL NUMBER OF OBSERVATIONS

150

DIRNAVOCEANMET SMOS

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

NOV  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

ALL  
MOON (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	28.6	46.7	48.5	49.0	49.2	49.3	49.6	49.7	49.7	49.9	50.0	50.0	50.1
≥ 20000	30.6	51.4	53.5	54.0	54.3	54.5	54.8	54.8	54.8	55.3	55.3	55.4	55.5
≥ 18000	30.6	51.4	53.5	54.0	54.3	54.5	54.8	54.8	54.8	55.3	55.3	55.4	55.5
≥ 16000	30.6	51.4	53.6	54.1	54.4	54.6	54.8	54.9	54.9	55.3	55.4	55.5	55.6
≥ 14000	30.9	52.0	54.3	54.8	55.2	55.3	55.6	55.7	55.7	56.1	56.2	56.3	56.4
≥ 12000	31.3	53.7	56.1	56.8	57.2	57.4	57.7	57.8	57.8	58.2	58.3	58.4	58.5
≥ 10000	33.3	58.8	61.3	61.9	62.4	62.7	62.9	63.0	63.0	63.4	63.6	63.7	63.8
≥ 9000	33.3	58.8	61.3	61.9	62.4	62.7	62.9	63.0	63.0	63.4	63.6	63.7	63.8
≥ 8000	34.7	62.2	64.7	65.3	65.9	66.2	66.4	66.5	66.5	66.9	67.1	67.2	67.3
≥ 7000	34.9	62.9	65.4	66.1	66.8	67.0	67.3	67.3	67.3	67.8	67.9	68.0	68.1
≥ 6000	35.4	64.2	66.7	67.4	68.1	68.3	68.6	68.7	68.7	69.1	69.3	69.4	69.4
≥ 5000	35.8	65.3	67.9	68.7	69.4	69.8	70.2	70.3	70.3	70.7	70.8	70.9	71.0
≥ 4500	36.7	66.8	69.5	70.3	71.3	71.6	72.0	72.1	72.1	72.5	72.7	72.8	72.8
≥ 4000	37.3	68.6	71.3	72.4	73.3	73.6	74.0	74.1	74.1	74.5	74.7	74.8	74.8
≥ 3500	38.0	70.3	73.0	74.1	75.0	75.3	75.8	75.9	75.9	76.3	76.5	76.6	76.7
≥ 3000	39.2	72.8	75.8	77.3	78.3	78.9	79.5	79.6	79.6	80.0	80.3	80.4	80.4
≥ 2500	39.5	74.4	77.5	79.3	80.2	80.9	81.5	81.6	81.6	82.0	82.3	82.4	82.4
≥ 2000	40.3	75.9	79.1	81.2	82.2	83.0	83.8	83.8	83.8	84.3	84.6	84.7	84.8
≥ 1800	40.5	76.2	79.3	81.4	82.4	83.3	84.0	84.1	84.1	84.6	84.8	84.9	85.0
≥ 1500	40.8	76.6	80.5	82.8	83.8	84.7	85.4	85.6	85.6	86.1	86.3	86.4	86.5
≥ 1200	41.0	77.2	81.2	83.4	84.8	85.8	86.5	86.7	86.7	87.2	87.4	87.5	87.6
≥ 1000	41.1	77.8	82.2	84.7	86.3	87.6	88.5	88.7	88.7	89.2	89.4	89.5	89.6
≥ 900	41.1	77.8	82.3	84.8	86.3	87.8	88.8	88.9	88.9	89.4	89.7	89.8	89.8
≥ 800	41.1	78.0	82.8	85.5	87.1	88.6	89.8	90.0	90.0	90.5	90.8	90.9	91.0
≥ 700	41.1	78.2	83.0	85.7	87.3	88.8	90.0	90.3	90.3	90.8	91.1	91.2	91.3
≥ 600	41.1	78.4	83.3	86.0	87.7	89.2	90.5	91.0	91.0	91.7	91.9	92.0	92.1
≥ 500	41.1	78.4	83.5	86.2	88.0	89.5	90.8	91.8	92.0	92.8	93.1	93.3	93.4
≥ 400	41.1	78.5	83.6	86.3	88.3	89.8	91.5	92.6	92.8	93.6	94.0	94.3	94.4
≥ 300	41.1	78.5	83.6	86.3	88.3	89.8	92.0	93.4	93.7	94.7	95.1	95.3	95.7
≥ 200	41.1	78.5	83.6	86.3	88.3	89.9	92.3	93.6	94.1	95.1	95.8	96.2	96.3
≥ 100	41.1	78.5	83.6	86.3	88.3	89.9	92.3	93.9	94.2	95.2	96.0	96.5	97.0
0	41.1	78.5	83.6	86.3	88.3	89.9	92.3	93.9	94.2	95.2	96.0	96.5	97.2

TOTAL NUMBER OF OBSERVATIONS

1200

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

DEC  
MONTH

01  
HOURS (LST)

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

CEILING (FEET)	VISIBILITY (STATUTE MILES)											
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½
NO CEILING	34.8	47.1	47.7	47.7	47.7	47.7	47.7	48.4	48.4	48.4	49.0	49.0
≥ 20000	36.1	52.3	52.9	52.9	52.9	52.9	52.9	53.6	53.6	53.6	54.2	54.2
≥ 18000	36.1	52.3	52.9	52.9	52.9	52.9	52.9	53.6	53.6	53.6	54.2	54.2
≥ 16000	36.1	52.3	52.9	52.9	52.9	52.9	52.9	53.6	53.6	53.6	54.2	54.2
≥ 14000	36.1	52.3	52.9	52.9	52.9	52.9	52.9	53.6	53.6	53.6	54.2	54.2
≥ 12000	36.1	52.9	53.6	53.6	53.6	53.6	53.6	54.2	54.2	54.2	54.8	54.8
≥ 10000	38.7	57.4	58.1	58.1	58.1	58.1	58.1	58.7	58.7	58.7	59.4	59.4
≥ 9000	38.7	57.4	58.1	58.1	58.1	58.1	58.1	58.7	58.7	58.7	59.4	59.4
8000	43.2	62.6	63.2	63.9	63.9	63.9	63.9	64.5	64.5	64.5	65.2	65.2
7000	43.2	63.2	63.9	64.5	64.5	64.5	64.5	65.2	65.2	65.2	65.8	65.8
6000	43.2	63.2	63.9	64.5	64.5	64.5	64.5	65.2	65.2	65.2	65.8	65.8
5000	43.9	64.5	65.2	65.8	65.8	65.8	65.8	66.5	66.5	66.5	67.1	67.1
4500	44.5	65.2	65.8	66.5	66.5	66.5	66.5	67.1	67.1	67.1	67.7	67.7
4000	45.2	65.8	66.5	67.1	67.1	67.1	67.1	67.7	67.7	67.7	68.4	68.4
3500	45.8	67.1	67.7	68.4	68.4	68.4	68.4	69.0	69.0	69.0	69.7	69.7
3000	46.5	67.7	68.4	69.0	69.0	69.0	69.0	69.7	69.7	69.7	70.3	70.3
2500	48.4	71.6	72.3	72.9	73.6	73.6	73.6	74.2	74.2	74.2	74.8	74.8
2000	52.3	76.8	78.7	80.0	80.7	80.7	80.7	81.3	81.3	81.3	81.9	81.9
1800	52.9	77.4	79.4	80.7	81.3	81.3	81.3	81.9	81.9	81.9	82.6	82.6
1500	52.9	77.4	79.4	80.7	81.3	81.3	81.3	81.9	81.9	81.9	82.6	82.6
1200	52.9	77.4	80.0	81.3	83.2	83.2	83.2	83.9	83.9	83.9	84.5	84.5
1000	52.9	77.4	80.0	81.3	83.9	83.9	83.9	84.5	84.5	84.5	85.2	85.2
900	52.9	77.4	80.0	81.3	83.9	83.9	83.9	84.5	84.5	84.5	85.2	85.2
800	52.9	77.4	81.3	83.2	85.2	85.2	85.2	85.8	85.8	85.8	86.5	86.5
700	52.9	77.4	81.3	83.2	85.2	85.2	85.2	85.8	85.8	85.8	86.5	86.5
600	52.9	77.4	82.6	84.5	86.5	86.5	86.5	87.1	87.1	87.1	87.7	87.7
500	52.9	77.4	83.2	85.8	87.7	87.7	87.7	88.4	88.4	88.4	89.0	89.0
400	52.9	77.4	83.2	85.8	87.7	87.7	87.7	88.4	88.4	88.4	89.0	89.0
300	52.9	77.4	83.2	85.8	87.7	87.7	87.7	88.4	88.4	88.4	89.0	89.0
200	52.9	77.4	83.2	85.8	87.7	87.7	87.7	88.4	88.4	88.4	89.0	89.0
100	52.9	77.4	83.2	85.8	87.7	87.7	87.7	88.4	88.4	88.4	89.0	89.0
0	52.9	77.4	83.2	85.8	87.7	87.7	87.7	88.4	88.4	88.4	89.0	89.0

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NOVA WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

WILLOW GROVE, PENNSYLVANIA

73-77

DEC

STATION NAME

YEARS

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

04

HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	27.7	40.7	41.9	41.9	41.9	41.9	41.9	41.9	41.9	42.6	42.6	42.6	43.2	43.2
≥ 20000	29.0	45.2	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.7	47.7	47.7	48.4	48.4
≥ 18000	29.0	45.2	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.7	47.7	47.7	48.4	48.4
≥ 16000	29.7	45.8	47.7	47.7	47.7	47.7	47.7	47.7	47.7	48.4	48.4	48.4	49.0	49.0
≥ 14000	30.3	46.5	48.4	48.4	48.4	48.4	48.4	48.4	48.4	49.0	49.0	49.0	49.7	49.7
≥ 12000	30.3	46.5	48.4	48.4	48.4	48.4	48.4	48.4	48.4	49.0	49.0	49.0	49.7	49.7
≥ 10000	34.2	54.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	57.4	57.4	57.4	58.1	58.1
≥ 9000	34.2	54.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	57.4	57.4	57.4	58.1	58.1
≥ 8000	38.7	60.7	62.6	62.6	62.6	62.6	62.6	62.6	62.6	63.2	63.2	63.2	63.9	63.9
≥ 7000	38.7	60.7	62.6	62.6	62.6	62.6	62.6	62.6	62.6	63.2	63.2	63.2	63.9	63.9
≥ 6000	40.0	61.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9	64.5	64.5	64.5	65.2	65.2
≥ 5000	41.9	65.2	67.1	67.1	67.1	67.1	67.1	67.1	67.1	67.7	67.7	67.7	68.4	68.4
≥ 4500	42.6	66.5	68.4	68.4	68.4	68.4	68.4	68.4	68.4	69.0	69.0	69.0	70.3	70.3
≥ 4000	43.2	67.1	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.7	69.7	69.7	71.0	71.0
≥ 3500	43.2	67.1	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.7	69.7	69.7	71.0	71.0
≥ 3000	43.2	70.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3	73.6	73.6	73.6	74.8	74.8
≥ 2500	43.2	71.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	74.8	74.8	74.8	76.1	76.1
≥ 2000	46.5	75.5	78.7	78.7	78.7	78.7	78.7	78.7	78.7	80.7	80.7	80.7	81.3	81.3
≥ 1800	47.1	76.1	79.4	79.4	79.4	79.4	79.4	79.4	79.4	81.3	81.3	81.3	81.9	81.9
≥ 1500	47.1	76.1	79.4	79.4	79.4	79.4	79.4	79.4	79.4	81.3	81.3	81.3	81.9	81.9
≥ 1200	47.1	76.1	79.4	79.4	79.4	79.4	79.4	79.4	79.4	81.3	81.3	81.3	81.9	81.9
≥ 1000	48.4	78.1	81.3	81.3	81.3	81.3	81.3	81.3	81.3	82.6	82.6	82.6	83.2	83.2
≥ 900	48.4	78.1	81.3	81.3	81.3	81.3	81.3	81.3	81.3	82.6	82.6	82.6	83.2	83.2
≥ 800	48.4	78.1	81.3	81.3	81.3	81.3	81.3	81.3	81.3	82.6	82.6	82.6	83.2	83.2
≥ 700	48.4	78.1	81.3	81.3	81.3	81.3	81.3	81.3	81.3	82.6	82.6	82.6	83.2	83.2
≥ 600	48.4	78.1	81.3	81.3	81.3	81.3	81.3	81.3	81.3	82.6	82.6	82.6	83.2	83.2
≥ 500	48.4	78.1	81.3	81.3	81.3	81.3	81.3	81.3	81.3	82.6	82.6	82.6	83.2	83.2
≥ 400	48.4	78.1	81.3	81.3	81.3	81.3	81.3	81.3	81.3	82.6	82.6	82.6	83.2	83.2
≥ 300	48.4	78.1	81.3	81.3	81.3	81.3	81.3	81.3	81.3	82.6	82.6	82.6	83.2	83.2
≥ 200	48.4	78.1	81.3	81.3	81.3	81.3	81.3	81.3	81.3	82.6	82.6	82.6	83.2	83.2
≥ 100	48.4	78.1	81.3	81.3	81.3	81.3	81.3	81.3	81.3	82.6	82.6	82.6	83.2	83.2
0	48.4	78.1	81.3	81.3	81.3	81.3	81.3	81.3	81.3	82.6	82.6	82.6	83.2	83.2

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

DEC  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

07  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)										
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1	≥ ¾	≥ ½
NO CEILING	27.1	38.7	41.3	41.3	41.3	41.3	41.9	42.6	42.6	42.6	42.6
≥ 20000	27.7	41.3	43.9	43.9	43.9	43.9	44.5	45.2	45.2	45.2	45.2
≥ 18000	27.7	41.3	43.9	43.9	43.9	43.9	44.5	45.2	45.2	45.2	45.2
≥ 16000	27.7	41.3	43.9	43.9	43.9	43.9	44.5	45.2	45.2	45.2	45.2
≥ 14000	28.4	41.9	44.5	44.5	45.2	45.2	45.8	46.5	46.5	46.5	46.5
≥ 12000	29.7	44.5	47.1	47.1	47.7	47.7	48.4	49.0	49.0	49.0	49.0
≥ 10000	32.9	50.3	52.9	52.9	53.6	53.6	54.2	54.8	54.8	54.8	54.8
≥ 9000	32.9	50.3	52.9	52.9	53.6	53.6	54.2	54.8	54.8	54.8	54.8
≥ 8000	36.8	55.5	58.1	58.1	58.7	58.7	59.4	60.0	60.0	60.0	60.0
≥ 7000	36.8	55.5	58.1	58.1	58.7	58.7	59.4	60.0	60.0	60.0	60.0
≥ 6000	36.8	56.8	59.4	59.4	60.0	60.0	60.7	61.3	61.3	61.3	61.3
≥ 5000	38.7	59.4	61.9	61.9	62.6	62.6	63.2	63.9	63.9	63.9	63.9
≥ 4500	40.7	61.9	64.5	64.5	65.2	65.2	65.8	66.5	66.5	66.5	66.5
≥ 4000	42.6	65.2	67.7	67.7	68.4	68.4	69.1	69.7	69.7	69.7	69.7
≥ 3500	42.6	65.2	67.7	67.7	68.4	68.4	69.1	69.7	69.7	69.7	69.7
≥ 3000	42.6	65.8	68.4	68.4	69.0	69.0	70.3	71.0	71.0	71.0	71.0
≥ 2500	43.9	67.7	70.3	70.3	71.6	71.6	72.3	73.0	73.0	73.0	73.0
≥ 2000	45.2	71.0	74.2	74.2	76.1	76.1	77.8	78.7	78.7	78.7	78.7
≥ 1800	45.2	71.0	74.2	74.2	76.1	76.1	77.8	78.7	78.7	78.7	78.7
≥ 1500	45.2	71.6	74.8	74.8	76.8	76.8	79.4	80.7	80.7	80.7	80.7
≥ 1200	45.2	71.6	74.8	74.8	76.8	76.8	79.4	80.7	80.7	80.7	80.7
≥ 1000	45.8	72.3	76.1	76.1	78.1	78.1	80.7	81.3	81.3	81.3	81.3
≥ 900	45.8	72.3	76.1	76.1	78.1	78.1	80.7	81.3	81.3	81.3	81.3
≥ 800	45.8	72.9	77.4	77.4	80.0	80.0	83.2	84.5	84.5	84.5	84.5
≥ 700	45.8	72.9	77.4	77.4	80.0	80.0	83.2	84.5	84.5	84.5	84.5
≥ 600	45.8	72.9	78.1	78.1	80.7	80.7	83.9	85.8	85.8	85.8	85.8
≥ 500	45.8	73.6	80.0	80.0	82.6	82.6	86.5	87.1	87.1	87.1	87.1
≥ 400	45.8	73.6	80.7	80.7	83.2	83.2	87.1	88.4	88.4	88.4	88.4
≥ 300	45.8	73.6	80.7	80.7	83.2	83.2	87.1	88.4	88.4	88.4	88.4
≥ 200	45.8	73.6	80.7	80.7	83.2	83.2	87.1	88.4	88.4	88.4	88.4
≥ 100	45.8	73.6	80.7	80.7	83.2	83.2	87.1	88.4	88.4	88.4	88.4
0	45.8	73.6	80.7	80.7	83.2	83.2	87.1	88.4	88.4	88.4	88.4

TOTAL NUMBER OF OBSERVATIONS

155

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

DEC  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

10  
HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	17.4	37.4	38.1	41.3	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
≥ 20000	19.4	41.9	43.2	46.5	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
≥ 18000	19.4	41.9	43.2	46.5	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
≥ 16000	19.4	41.9	43.2	46.5	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
≥ 14000	19.4	43.2	44.5	47.7	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4	48.4
≥ 12000	20.7	44.5	46.5	49.7	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3
≥ 10000	23.2	49.7	51.6	54.8	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5
≥ 9000	23.2	49.7	51.6	54.8	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5
≥ 8000	25.2	52.9	55.5	59.4	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7
≥ 7000	25.8	54.2	56.8	60.7	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9
≥ 6000	25.8	54.8	57.4	61.3	62.6	62.6	62.6	62.6	62.6	62.6	62.6	62.6	62.6
≥ 5000	26.5	56.8	59.4	63.2	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5
≥ 4500	26.5	56.8	60.0	63.9	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2
≥ 4000	29.0	60.0	63.9	67.7	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0
≥ 3500	29.7	61.3	65.8	69.7	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0
≥ 3000	29.7	65.2	69.7	74.8	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1
≥ 2500	29.7	65.2	69.7	75.5	77.4	77.4	77.4	77.4	77.4	77.4	77.4	77.4	77.4
≥ 2000	29.7	65.5	71.0	77.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 1800	29.7	66.5	71.0	77.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 1500	29.7	66.5	71.0	77.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
≥ 1200	31.0	69.0	73.6	80.7	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
≥ 1000	31.0	69.0	73.6	80.7	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5
≥ 900	31.0	69.7	74.2	81.3	85.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2
≥ 800	31.0	71.0	75.5	82.6	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5
≥ 700	31.0	71.0	75.5	82.6	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1
≥ 600	31.0	71.0	76.8	83.9	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0
≥ 500	31.0	71.0	76.8	83.9	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3
≥ 400	31.6	71.6	77.4	84.5	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0
≥ 300	31.6	71.6	77.4	84.5	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0
≥ 200	31.6	71.6	77.4	84.5	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0
≥ 100	31.6	71.6	77.4	84.5	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0
≥ 0	31.6	71.6	77.4	84.5	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

DEC  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

13  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16
NO CEILING	15.5	36.1	38.1	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7
≥ 20000	18.1	41.3	43.2	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9
18000	18.1	41.3	43.2	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9
16000	18.1	41.3	43.2	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9
14000	18.1	41.3	43.2	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9
12000	18.1	42.6	44.5	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2
10000	18.1	48.4	51.0	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
9000	18.1	48.4	51.0	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
8000	20.0	52.9	56.8	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4
7000	20.0	53.6	57.4	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1
6000	20.7	54.8	58.7	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4
5000	21.3	56.8	60.7	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9
4500	21.3	57.4	61.9	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2
4000	23.2	61.3	65.8	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7
3500	25.2	66.5	71.0	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9
3000	25.8	69.7	74.2	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8
2500	25.8	71.6	76.1	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7
2000	25.8	72.3	76.8	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
1800	25.8	72.3	76.8	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
1500	25.8	73.6	78.7	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9	81.9
1200	26.5	74.8	80.7	83.9	85.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2
1000	26.5	76.1	81.9	85.6	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1
900	26.5	76.1	81.9	85.6	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1
800	26.5	76.1	81.9	85.6	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1	87.1
700	26.5	76.8	82.6	86.5	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4
600	26.5	76.8	82.6	86.5	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0
500	26.5	77.4	83.9	88.4	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0
400	26.5	77.4	83.9	88.4	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6
300	26.5	77.4	83.9	88.4	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3
200	26.5	77.4	83.9	88.4	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3
100	26.5	77.4	83.9	88.4	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3
0	26.5	77.4	83.9	88.4	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3

TOTAL NUMBER OF OBSERVATIONS

155

2

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

# CEILING VERSUS VISIBILITY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

DEC  
MONTH

0000

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

16  
HOURS (LST)

CEILING (FEET)	VISIBILITY (STATUTE MILES)												
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ 5/16	≥ ¼
NO CEILING	19.4	35.5	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8
≥ 20000	20.0	41.9	43.2	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5
≥ 18000	20.0	42.6	43.9	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2
≥ 16000	20.0	42.6	43.9	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2
≥ 14000	20.0	42.6	43.9	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2	45.2
≥ 12000	20.7	44.5	46.5	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7
≥ 10000	21.3	47.7	49.7	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0
≥ 9000	21.3	47.7	49.7	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0
≥ 8000	22.6	52.9	54.8	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1
≥ 7000	22.6	53.6	55.5	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 6000	22.6	54.2	56.1	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4
≥ 5000	24.5	59.4	61.3	62.6	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2
≥ 4500	24.5	60.7	62.6	63.9	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5
≥ 4000	25.2	63.9	65.8	67.1	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7
≥ 3500	25.2	65.8	67.7	69.0	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7
≥ 3000	25.8	69.0	71.6	73.6	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2
≥ 2500	25.8	71.6	74.2	76.1	76.8	77.4	77.4	77.4	77.4	77.4	77.4	77.4	77.4
≥ 2000	25.8	72.9	76.1	78.1	78.7	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
≥ 1800	25.8	73.6	76.8	78.7	79.4	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7
≥ 1500	26.5	74.8	79.4	81.3	82.6	83.9	83.9	83.9	83.9	83.9	83.9	83.9	83.9
≥ 1200	26.5	74.8	79.4	81.3	83.2	84.5	84.5	84.5	84.5	84.5	84.5	84.5	84.5
≥ 1000	26.5	77.4	81.9	83.9	85.8	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0
≥ 900	26.5	77.4	81.9	83.9	85.8	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0
≥ 800	26.5	77.4	81.9	83.9	85.8	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0
≥ 700	26.5	77.4	81.9	83.9	85.8	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0
≥ 600	26.5	77.4	81.9	83.9	85.8	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0
≥ 500	26.5	78.1	82.6	84.5	87.1	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9
≥ 400	26.5	78.1	82.6	84.5	87.7	93.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 300	26.5	78.1	82.6	84.5	87.7	93.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 200	26.5	78.1	82.6	84.5	87.7	93.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 100	26.5	78.1	82.6	84.5	87.7	93.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
≥ 0	26.5	78.1	82.6	84.5	87.7	93.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6

TOTAL NUMBER OF OBSERVATIONS

155

DIRNAVOCEANMET SMOS

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# CEILING VERSUS VISIBILITY

STATION  
14793

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

DEC  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

19  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)											
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½
NO CEILING	29.0	43.9	44.5	44.5	44.5	45.2	45.2	45.2	45.2	45.2	45.2	45.2
≥ 20000	31.0	49.0	49.7	49.7	49.7	50.3	50.3	50.3	50.3	50.3	50.3	50.3
≥ 18000	31.6	49.7	50.3	50.3	50.3	51.0	51.0	51.0	51.0	51.0	51.0	51.0
≥ 16000	31.6	49.7	50.3	50.3	50.3	51.0	51.0	51.0	51.0	51.0	51.0	51.0
≥ 14000	31.6	49.7	50.3	50.3	50.3	51.0	51.0	51.0	51.0	51.0	51.0	51.0
≥ 12000	32.3	51.6	52.3	52.3	52.3	52.9	52.9	52.9	52.9	52.9	52.9	52.9
≥ 10000	34.2	54.8	55.5	56.1	56.1	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 9000	34.2	54.8	55.5	56.1	56.1	56.8	56.8	56.8	56.8	56.8	56.8	56.8
≥ 8000	34.8	57.4	58.1	58.7	58.7	59.4	59.4	59.4	59.4	59.4	59.4	59.4
≥ 7000	34.8	57.4	58.1	58.7	58.7	59.4	59.4	59.4	59.4	59.4	59.4	59.4
≥ 6000	36.1	58.7	59.4	60.0	60.0	60.7	60.7	60.7	60.7	60.7	60.7	60.7
≥ 5000	38.1	61.9	62.6	63.2	63.2	63.9	63.9	63.9	63.9	63.9	63.9	63.9
≥ 4500	38.7	63.2	64.5	65.2	65.2	65.8	65.8	65.8	65.8	65.8	65.8	65.8
≥ 4000	40.0	66.5	67.7	69.0	69.0	69.7	69.7	69.7	69.7	69.7	69.7	69.7
≥ 3500	40.0	67.1	68.4	69.7	69.7	70.3	70.3	70.3	70.3	70.3	70.3	70.3
≥ 3000	41.9	72.3	74.2	75.5	75.5	76.8	76.8	76.8	76.8	76.8	76.8	76.8
≥ 2500	42.6	73.6	75.5	76.8	77.4	78.7	78.7	78.7	78.7	78.7	78.7	78.7
≥ 2000	43.9	76.1	78.7	80.7	81.9	83.2	83.2	83.2	83.2	83.2	83.2	83.2
≥ 1800	43.9	76.1	78.7	80.7	81.9	83.2	83.2	83.2	83.2	83.2	83.2	83.2
≥ 1500	43.9	76.1	78.7	80.7	81.9	83.2	83.2	83.2	83.2	83.2	83.2	83.2
≥ 1200	43.9	76.8	79.4	81.3	82.6	83.9	83.9	83.9	83.9	83.9	83.9	83.9
≥ 1000	43.9	78.1	80.7	83.2	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 900	43.9	78.1	80.7	83.2	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 800	43.9	78.1	80.7	83.2	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 700	43.9	78.1	80.7	83.2	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 600	43.9	78.1	80.7	83.2	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 500	43.9	78.1	80.7	83.2	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 400	43.9	78.1	80.7	83.2	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 300	43.9	78.1	80.7	83.2	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 200	43.9	78.1	80.7	83.2	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 100	43.9	78.1	80.7	83.2	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7
≥ 0	43.9	78.1	80.7	83.2	86.5	87.7	87.7	87.7	87.7	87.7	87.7	87.7

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

DEC  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

22  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)											
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½
NO CEILING	29.7	42.6	43.9	43.9	43.9	43.9	44.5	45.2	45.8	46.5	46.5	46.5
≥ 20000	33.6	50.3	51.6	51.6	51.6	51.6	51.6	52.3	52.9	53.6	54.2	54.2
≥ 18000	33.6	50.3	51.6	51.6	51.6	51.6	51.6	52.3	52.9	53.6	54.2	54.2
≥ 16000	33.6	50.3	51.6	51.6	51.6	51.6	51.6	52.3	52.9	53.6	54.2	54.2
≥ 14000	33.6	50.3	51.6	51.6	51.6	51.6	51.6	52.3	52.9	53.6	54.2	54.2
≥ 12000	35.5	52.3	53.6	53.6	53.6	53.6	54.2	54.8	55.5	56.1	56.1	56.1
≥ 10000	38.1	56.8	58.1	58.1	58.1	58.1	58.7	59.4	60.0	60.7	60.7	60.7
≥ 9000	38.1	57.4	58.7	58.7	58.7	58.7	59.4	60.0	60.7	61.3	61.3	61.3
≥ 8000	40.7	60.7	61.9	61.9	61.9	61.9	62.6	63.2	63.9	64.5	64.5	64.5
≥ 7000	40.7	60.7	61.9	61.9	61.9	61.9	62.6	63.2	63.9	64.5	64.5	64.5
≥ 6000	41.3	61.3	63.2	63.2	63.2	63.2	63.9	64.5	65.2	65.8	65.8	65.8
≥ 5000	43.9	63.9	66.5	66.5	66.5	66.5	67.1	67.7	68.4	69.0	69.0	69.0
≥ 4500	45.2	65.2	67.7	67.7	67.7	67.7	68.4	69.0	69.7	70.3	70.3	70.3
≥ 4000	46.5	66.5	69.0	69.0	69.0	69.0	69.7	70.3	71.0	71.6	71.6	71.6
≥ 3500	46.5	67.7	71.0	71.0	71.0	71.0	71.6	72.3	72.9	73.6	73.6	73.6
≥ 3000	47.1	69.0	72.9	73.6	73.6	73.6	74.2	74.8	75.5	76.1	76.1	76.1
≥ 2500	47.1	71.0	75.5	76.8	76.8	76.8	77.4	78.1	78.7	79.4	79.4	79.4
≥ 2000	49.7	75.5	80.0	81.3	81.3	81.3	82.6	83.2	83.9	84.5	84.5	84.5
≥ 1800	49.7	75.5	80.7	81.9	81.9	81.9	82.6	83.2	83.9	84.5	85.2	85.2
≥ 1500	49.7	75.5	80.7	82.6	82.6	82.6	83.2	83.9	84.5	85.2	86.5	86.5
≥ 1200	49.7	76.1	81.3	83.2	83.2	83.2	83.9	84.5	85.2	85.8	87.7	87.7
≥ 1000	49.7	76.8	81.9	83.9	83.9	83.9	84.5	85.2	85.8	87.7	87.7	87.7
≥ 900	49.7	76.8	81.9	83.9	83.9	83.9	84.5	85.2	85.8	87.7	87.7	87.7
≥ 800	49.7	76.8	81.9	83.9	83.9	83.9	84.5	85.2	85.8	87.7	87.7	87.7
≥ 700	49.7	76.8	81.9	83.9	83.9	83.9	84.5	85.2	85.8	87.7	87.7	87.7
≥ 600	49.7	77.4	82.6	85.2	85.2	85.2	85.8	86.5	87.1	87.7	87.7	87.7
≥ 500	49.7	77.4	82.6	85.2	85.2	85.2	85.8	86.5	87.1	87.7	87.7	87.7
≥ 400	49.7	77.4	82.6	85.2	85.2	85.2	85.8	86.5	87.1	87.7	87.7	87.7
≥ 300	49.7	77.4	83.2	86.5	86.5	86.5	87.1	87.7	88.4	89.0	89.0	89.0
≥ 200	49.7	77.4	83.2	87.1	87.1	87.1	87.7	88.4	89.0	89.7	89.7	89.7
≥ 100	49.7	77.4	83.2	87.1	87.1	87.1	87.7	88.4	89.0	89.7	89.7	89.7
0	49.7	77.4	83.2	87.1	87.1	87.1	87.7	88.4	89.0	89.7	89.7	89.7

TOTAL NUMBER OF OBSERVATIONS

155

# CEILING VERSUS VISIBILITY

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

14793

WILLOW GROVE, PENNSYLVANIA

73-77

DEC

STATION

STATION NAME

YEARS

MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

ALL  
HOURS (L.S.T.)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼	≥ 0
NO CEILING	25.1	40.2	41.5	42.0	42.1	42.2	42.3	42.6	42.7	42.8	42.9	43.0	43.0	43.2
≥ 20000	26.9	45.4	46.9	47.5	47.6	47.7	47.8	48.1	48.2	48.3	48.4	48.5	48.5	48.6
≥ 18000	26.9	45.6	47.0	47.7	47.7	47.8	48.0	48.2	48.3	48.5	48.6	48.6	48.6	48.8
≥ 16000	27.0	45.7	47.1	47.7	47.8	47.9	48.1	48.3	48.4	48.6	48.6	48.7	48.7	48.9
≥ 14000	27.2	46.1	47.5	48.2	48.3	48.4	48.6	48.8	48.9	49.0	49.1	49.2	49.2	49.4
≥ 12000	27.9	47.4	49.0	49.7	49.8	49.9	50.1	50.3	50.4	50.6	50.7	50.7	50.7	50.9
≥ 10000	30.1	52.5	54.2	54.9	55.1	55.2	55.3	55.6	55.7	55.8	55.9	56.0	56.0	56.2
≥ 9000	30.1	52.6	54.3	55.0	55.2	55.2	55.4	55.7	55.7	55.9	56.0	56.1	56.1	56.3
≥ 8000	32.7	56.9	58.9	59.6	60.0	60.1	60.2	60.5	60.6	60.7	60.8	60.9	61.0	61.2
≥ 7000	32.8	57.3	59.3	60.2	60.4	60.5	60.7	60.9	61.0	61.1	61.2	61.3	61.4	61.6
≥ 6000	33.3	58.2	60.2	61.1	61.5	61.5	61.7	61.9	62.0	62.2	62.3	62.4	62.4	62.7
≥ 5000	34.6	61.0	63.1	64.0	64.4	64.5	64.7	64.9	65.0	65.2	65.3	65.4	65.4	65.7
≥ 4500	35.5	62.1	64.4	65.4	65.8	66.0	66.1	66.4	66.5	66.6	66.7	66.8	66.9	67.1
≥ 4000	36.9	64.5	66.9	68.2	68.6	68.8	69.0	69.2	69.3	69.5	69.6	69.7	69.8	70.0
≥ 3500	37.3	66.1	68.6	69.8	70.3	70.5	70.7	70.9	71.0	71.2	71.4	71.5	71.5	71.8
≥ 3000	37.8	68.6	71.5	73.1	73.6	73.9	74.0	74.4	74.5	74.9	75.1	75.2	75.2	75.5
≥ 2500	38.3	70.5	73.4	75.2	76.1	76.5	76.6	77.0	77.1	77.5	77.7	77.8	77.8	78.1
≥ 2000	39.8	73.3	76.8	79.0	80.0	80.5	80.7	81.1	81.2	81.6	81.8	81.9	82.0	82.3
≥ 1800	40.0	73.6	77.1	79.4	80.4	80.9	81.1	81.5	81.6	82.0	82.2	82.3	82.4	82.7
≥ 1500	40.2	74.1	77.9	80.3	81.6	82.1	82.3	82.8	82.9	83.4	83.6	83.7	84.0	84.2
≥ 1200	40.3	74.6	78.6	81.1	82.7	83.2	83.5	84.0	84.0	84.5	84.8	84.9	85.2	85.4
≥ 1000	40.6	75.7	79.7	82.5	84.7	85.6	86.0	86.7	86.8	87.3	87.7	87.7	88.2	88.5
≥ 900	40.6	75.8	79.9	82.7	85.0	85.9	86.3	87.0	87.1	87.7	88.0	88.1	88.6	88.8
≥ 800	40.6	76.0	80.2	83.2	85.7	86.7	87.3	88.2	88.2	88.9	89.2	89.3	89.8	90.0
≥ 700	40.6	76.1	80.5	83.5	86.1	87.3	87.8	88.8	88.9	89.6	89.9	90.0	90.5	90.7
≥ 600	40.6	76.1	81.1	84.2	87.1	88.5	89.0	90.1	90.2	91.0	91.3	91.4	91.9	92.2
≥ 500	40.6	76.5	81.8	85.3	88.6	90.2	90.7	91.8	91.9	92.7	93.1	93.3	94.0	94.2
≥ 400	40.7	76.5	81.9	85.6	89.0	90.7	91.4	92.5	92.7	93.8	94.1	94.4	95.0	95.4
≥ 300	40.7	76.5	82.0	85.8	89.4	91.2	92.0	93.3	93.5	94.8	95.5	95.7	96.5	97.1
≥ 200	40.7	76.5	82.0	85.9	89.4	91.3	92.2	93.8	94.0	95.6	96.5	96.8	97.6	98.4
≥ 100	40.7	76.5	82.0	85.9	89.4	91.3	92.2	93.8	94.0	95.7	96.7	96.9	97.7	98.4
≥ 0	40.7	76.5	82.0	85.9	89.4	91.3	92.2	93.8	94.0	95.7	96.7	96.9	97.7	98.4

TOTAL NUMBER OF OBSERVATIONS

1240

NAVAL WEATHER SERVICE DETACHMENT, ASHEVILLE, NC

## CEILING VERSUS VISIBILITY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

STATION NAME

YEARS

ALL  
MONTHPERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)ALL  
HOURS (L S T)

CEILING (FEET)	VISIBILITY (STATUTE MILES)													
	≥ 10	≥ 6	≥ 5	≥ 4	≥ 3	≥ 2½	≥ 2	≥ 1½	≥ 1¼	≥ 1	≥ ¾	≥ ½	≥ 5/16	≥ ¼
NO CEILING	27.8	42.1	44.8	46.4	47.7	48.2	48.7	48.9	49.0	49.2	49.3	49.3	49.3	49.4
≥ 20000	30.0	46.7	49.8	51.7	53.3	53.9	54.4	54.7	54.7	55.0	55.1	55.1	55.2	55.3
≥ 18000	30.1	46.8	49.9	51.8	53.4	53.9	54.5	54.8	54.8	55.1	55.2	55.2	55.3	55.4
≥ 16000	30.1	46.8	49.9	51.8	53.4	54.0	54.5	54.8	54.8	55.1	55.2	55.2	55.3	55.4
≥ 14000	30.3	47.3	50.4	52.4	54.0	54.5	55.1	55.4	55.4	55.7	55.8	55.9	55.9	56.0
≥ 12000	30.9	48.5	51.7	53.8	55.4	56.0	56.6	56.9	56.9	57.2	57.3	57.4	57.4	57.5
≥ 10000	32.6	52.0	55.6	58.0	59.9	60.5	61.2	61.5	61.6	61.9	62.0	62.1	62.1	62.2
≥ 9000	32.7	52.2	55.8	58.2	60.1	60.8	61.4	61.8	61.8	62.1	62.2	62.3	62.3	62.5
≥ 8000	34.1	55.5	59.5	62.1	64.2	64.9	65.7	66.1	66.1	66.4	66.6	66.7	66.7	66.8
≥ 7000	34.3	56.0	60.0	62.6	64.7	65.5	66.3	66.6	66.7	67.0	67.2	67.3	67.3	67.4
≥ 6000	34.7	57.0	61.1	63.8	65.9	66.8	67.6	68.0	68.0	68.3	68.5	68.6	68.6	68.8
≥ 5000	35.3	58.3	62.5	65.3	67.5	68.4	69.3	69.7	69.7	70.0	70.2	70.3	70.3	70.5
≥ 4500	36.0	59.5	63.8	66.7	69.0	70.0	70.8	71.2	71.3	71.6	71.8	71.9	71.9	72.1
≥ 4000	36.9	61.6	66.2	69.3	71.7	72.7	73.6	74.1	74.1	74.5	74.7	74.8	74.8	75.0
≥ 3500	37.6	63.0	67.7	70.9	73.4	74.5	75.5	75.9	76.0	76.4	76.6	76.7	76.7	76.9
≥ 3000	38.5	65.4	70.6	74.2	77.1	78.2	79.3	79.9	79.9	80.3	80.6	80.7	80.7	80.9
≥ 2500	39.0	66.5	71.9	75.7	78.7	80.0	81.1	81.7	81.7	82.2	82.4	82.5	82.6	82.7
≥ 2000	39.4	67.9	73.5	77.7	80.9	82.3	83.6	84.2	84.3	84.8	85.0	85.1	85.1	85.3
≥ 1800	39.5	68.0	73.7	77.9	81.2	82.5	83.6	84.5	84.5	85.0	85.3	85.4	85.4	85.6
≥ 1500	39.7	68.6	74.7	79.1	82.6	84.0	85.4	86.1	86.1	86.7	87.0	87.1	87.1	87.3
≥ 1200	39.8	69.1	75.3	79.8	83.4	85.0	86.4	87.1	87.2	87.8	88.0	88.1	88.2	88.4
≥ 1000	39.8	69.6	76.1	80.8	84.8	86.5	88.2	89.0	89.1	89.7	90.1	90.3	90.3	90.5
≥ 900	39.8	69.7	76.2	81.0	85.0	86.8	88.5	89.3	89.4	90.0	90.4	90.6	90.6	90.8
≥ 800	39.9	69.8	76.6	81.5	85.6	87.5	89.4	90.3	90.4	91.2	91.6	91.8	91.9	92.1
≥ 700	39.9	69.9	76.7	81.7	85.9	87.9	89.9	90.8	90.9	91.7	92.1	92.3	92.4	92.6
≥ 600	39.9	70.1	76.9	82.0	86.5	88.6	90.7	91.7	91.8	92.7	93.1	93.4	93.4	93.7
≥ 500	39.9	70.1	77.1	82.3	87.0	89.2	91.5	92.7	92.8	93.8	94.4	94.7	94.8	95.1
≥ 400	39.9	70.2	77.2	82.5	87.3	89.7	92.2	93.5	93.6	94.7	95.4	95.8	95.9	96.2
≥ 300	39.9	70.2	77.3	82.6	87.6	90.0	92.6	94.3	94.4	95.7	96.5	96.6	97.0	97.4
≥ 200	39.9	70.2	77.3	82.7	87.6	90.1	93.0	94.6	94.7	96.1	97.1	97.2	97.7	98.3
≥ 100	39.9	70.2	77.3	82.7	87.6	90.1	93.0	94.6	94.8	96.3	97.3	97.5	98.3	99.2
0	39.9	70.2	77.3	82.7	87.6	90.1	93.0	94.6	94.8	96.3	97.4	97.5	98.4	99.1

TOTAL NUMBER OF OBSERVATIONS

14608

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5704 SKY COVER JAN 68

**JAN**  
**MONTH**

73-77

STATION NAME
WILLOW GROVE, PENNSYLVANIA

14793  
STATION

PERIOD

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF TENTHS OF TOTAL SKY COVER										MEAN TENTHS OF SKY COVER	TOTAL NO. OF OBS.	
		0	1	2	3	4	5	6	7	8	9			10
JAN	01	29.0	7.1	5.2	3.2	5.2	1.3	2.6	2.6	3.9	1.3	38.7	5.2	155
	04	30.3	4.5	5.8	1.9	1.9	1.3	3.2	4.5	5.2	.6	40.6	5.4	155
	07	12.9	8.4	5.8	4.5	2.6	6.5	5.2	7.1	3.9	5.2	38.1	6.1	155
	10	12.3	2.6	4.5	5.8	9.0	1.3	2.6	6.5	6.5	7.1	41.9	6.7	155
	13	9.0	3.9	6.5	4.5	3.2	1.9	2.6	9.0	9.0	5.2	45.2	7.0	155
	16	12.3	3.9	7.1	8.4	1.3	5.2	3.2	3.2	8.4	3.9	43.2	6.5	155
	19	24.5	5.8	2.6	2.6	3.2	4.5	4.5	6.5	9.0	1.9	34.8	5.6	155
	22	31.0	1.9	5.2	3.2	1.9	1.9	3.2	3.9	5.8	1.3	40.6	5.5	155
TOTALS		20.2	4.8	5.3	4.3	3.5	3.0	3.4	5.4	6.5	3.3	40.4	6.0	1240

FEB  
MONTH

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF TENTHS OF TOTAL SKY COVER										MEAN TENTHS OF SKY COVER	TOTAL NO. OF OBS.	
		0	1	2	3	4	5	6	7	8	9			10
FER	01	31.9	6.4	2.8	3.5	3.5	1.4	2.8	2.8	5.7	4.3	34.8	5.1	141
	04	33.3	2.8	5.7	1.4	1.4	2.8	3.5	2.1	4.3	5.7	36.9	5.3	141
	07	21.3	6.4	5.0	7.8	4.3	2.1	2.8	6.4	2.8	2.8	38.3	5.6	141
	10	17.0	7.1	7.1	4.3	3.5	7.1	1.4	5.0	7.8	2.8	36.9	5.8	141
	13	13.5	3.5	5.7	5.7	5.0	5.7	5.0	5.7	8.5	4.3	37.6	6.3	141
	16	16.3	3.5	5.0	3.5	.7	7.1	8.5	9.2	3.5	5.0	37.6	6.3	141
	19	29.1	7.8	.7	5.0	2.8	1.4	2.1	7.1	5.7	1.4	36.9	5.3	141
	22	36.9	2.8	4.3	4.3	2.1	1.4	5.0	2.1	5.0	3.5	32.6	4.8	141
TOTALS		24.9	5.0	4.5	4.4	2.9	3.6	3.9	5.1	5.4	3.7	36.5	5.6	1128

# SKY COVER

14793 STATION NAME: WILLOW GROVE, PENNSYLVANIA PERIOD: 73-77 MONTH: MAR

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF TENTHS OF TOTAL SKY COVER										MEAN TENTHS OF SKY COVER	TOTAL NO. OF OBS.
		0	1	2	3	4	5	6	7	8	9	10	
MAR	01	27.1	4.5	3.2	3.9	1.3		.6	3.9	4.5	1.3	49.7	155
	04	23.2	3.2	2.6	6.5	.6	3.2	2.6	2.6	3.2	4.5	47.7	155
	07	16.1	3.2	1.9	3.9	1.9	5.2	1.3	5.2	7.7	9.0	44.5	155
	10	11.0	4.5	3.9	6.5	5.8	2.6	2.6	4.5	7.1	9.0	42.6	155
	13	9.0	5.8	1.9	1.3	2.6	4.5	1.9	5.8	10.3	7.7	49.0	155
	16	9.7	4.5	2.6	3.9	3.2	5.8	3.2	5.8	7.1	5.2	49.0	155
	19	13.5	7.1	3.9	5.8	4.5	4.5	2.6	7.1	4.5	1.3	45.2	155
	22	27.7	3.2	3.2	1.9	1.3	1.3	2.6	3.9	3.2	3.2	48.4	155
TOTALS		17.2	4.5	2.9	4.2	2.7	3.4	2.2	4.9	6.0	5.2	47.0	1240

**APR**  
**MONTH**

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF TENTHS OF TOTAL SKY COVER										MEAN TENTHS OF SKY COVER	TOTAL NO. OF OBS.	
		0	1	2	3	4	5	6	7	8	9			10
APR	01	33.3	2.0	2.0	4.0	6.0	2.0	4.0	3.3	4.0	2.7	36.7	5.2	150
	04	31.3	2.7	2.7	4.0	3.3	2.0	2.0	12.7	3.3	2.0	34.0	5.3	150
	07	27.3	4.7	3.3	2.7	2.0	3.3	4.7	8.7	9.3	3.3	30.7	5.4	150
	10	24.0	2.7	1.3	4.7	4.7	2.7	5.3	4.7	8.0	8.0	34.0	5.9	150
	13	14.7	4.7	3.3	8.7	5.3	2.7	4.0	6.0	8.7	4.0	38.0	6.2	150
	16	18.7	3.3	3.3	5.3	3.3	5.3	5.3	8.7	5.3	8.7	32.7	6.1	150
	19	16.7	8.7	6.0	5.3	2.7	6.0	4.0	4.7	4.0	6.0	36.0	5.8	150
	22	32.7	2.7	6.0	4.0	3.3	1.3	2.0	5.3	8.7	5.3	28.7	5.0	150
TOTALS		24.8	3.9	3.5	4.8	3.8	3.2	3.9	6.8	6.4	5.0	33.9	5.6	1200

MAY  
MONTH

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF TENTHS OF TOTAL SKY COVER										MEAN TENTHS OF SKY COVER	TOTAL NO. OF OBS.	
		0	1	2	3	4	5	6	7	8	9			10
MAY	01	24.5	3.9	4.5	7.7	2.6	2.6	2.6	6.5	6.5	3.2	35.5	5.6	155
	04	31.6	2.6	1.9	7.1	3.2	1.3	.6	4.5	6.5	5.8	34.8	5.3	155
	07	22.6	5.2	6.5	4.5	3.2	1.9	3.2	2.6	4.5	3.2	42.6	5.8	155
	10	15.5	5.2	5.2	3.9	3.2	5.8	5.2	3.2	6.5	3.9	42.6	6.3	155
	13	4.5	4.5	3.2	7.1	3.2	7.1	2.6	4.5	9.0	7.7	46.5	7.3	155
	16	5.8	2.6	3.9	5.8	5.2	5.8	5.8	8.4	8.4	4.5	43.9	7.2	155
	19	5.2	3.9	4.5	8.4	6.5	5.2	3.9	5.8	7.1	5.8	43.9	7.0	155
	22	21.9	3.9	4.5	11.0	2.6	1.9	2.6	6.5	7.1	.6	37.4	5.6	155
TOTALS		16.5	4.0	4.3	6.9	3.7	4.0	3.3	5.3	7.0	4.3	40.9	6.3	1240

AD-A063 832

NAVAL WEATHER SERVICE DETACHMENT ASHEVILLE N C  
SUMMARY OF METEOROLOGICAL OBSERVATIONS, SURFACE (SMOS) WILLOW 6--ETC(U)  
JUL 78

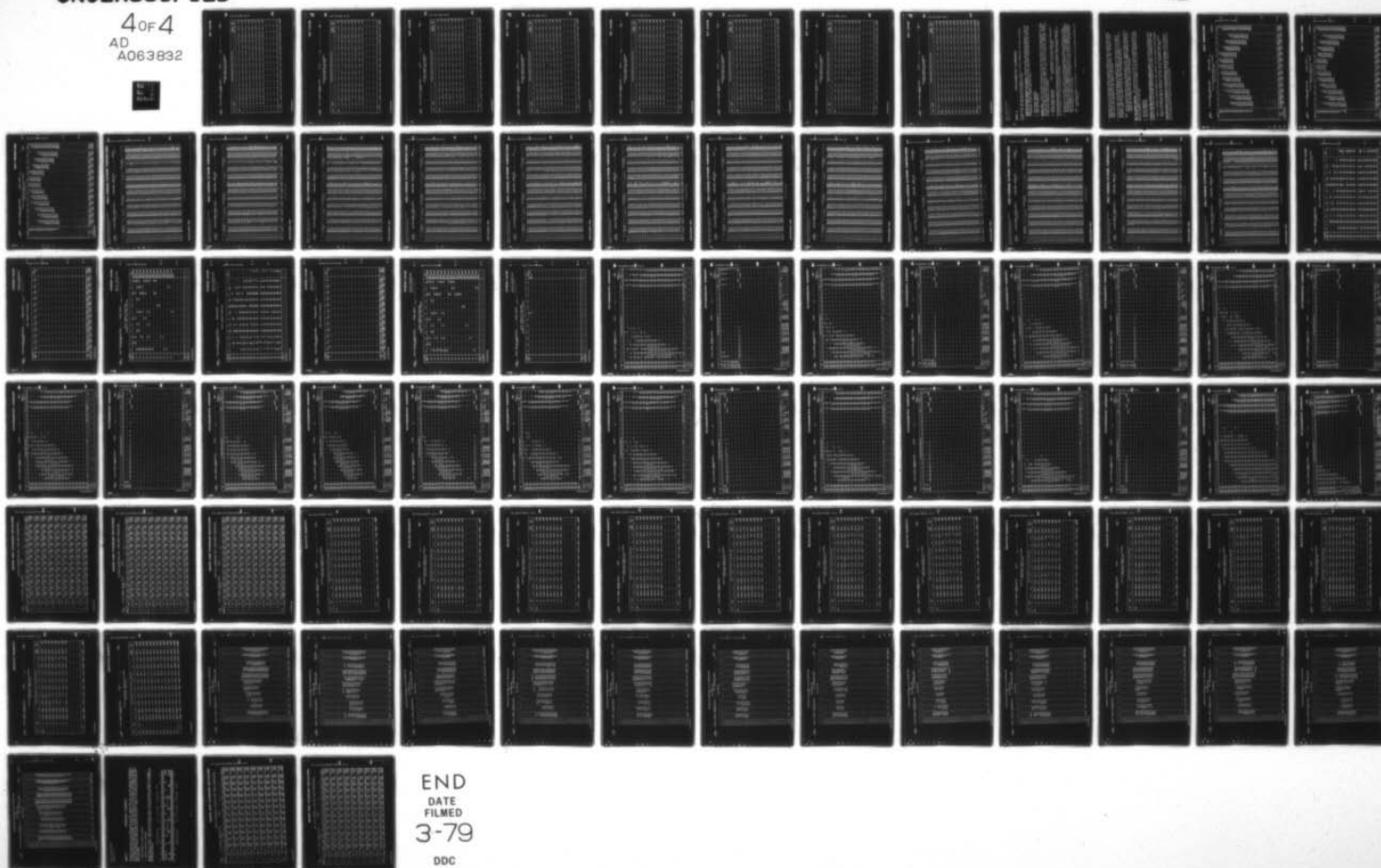
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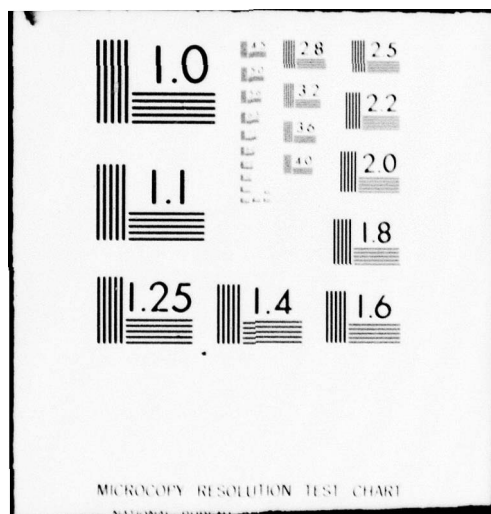
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4 of 4

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END  
DATE  
FILMED  
3-79  
DDC



# SKY COVER

**MONTH**  
**JUN**

PERIOD

73-77

WILLOW GROVE, PENNSYLVANIA

14793  
STATION

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF TENTHS OF TOTAL SKY COVER										MEAN TENTHS OF SKY COVER	TOTAL NO. OF OBS.	
		0	1	2	3	4	5	6	7	8	9			10
JUN	01	19.3	2.7	7.3	8.7	4.0	1.3	2.7	8.0	6.7	5.3	34.0	5.8	150
	04	14.7	2.7	5.3	6.7	7.3	4.0	4.0	5.3	5.3	5.3	39.3	6.3	150
	07	13.3	2.7	4.0	6.0	3.3	4.0	2.0	5.3	9.3	3.3	46.7	6.8	150
	10	9.3	5.3	4.0	5.3	4.7	3.3	7.3	6.7	9.3	4.7	40.0	6.7	150
	13	3.3	2.0	.7	2.0	4.0	8.0	7.3	13.3	14.7	8.0	36.7	7.6	150
	16	3.3	2.7	2.7	5.3	6.0	5.3	8.7	8.7	13.3	6.7	37.3	7.3	150
	19	8.0	5.3	4.0	3.3	9.3	4.0	4.0	6.0	12.7	11.3	32.0	6.7	150
	22	16.0	2.0	6.7	6.7	7.3	4.0	2.7	7.3	11.3	2.7	33.3	6.0	150
TOTALS		10.9	3.2	4.3	5.5	5.7	4.2	4.8	7.6	10.3	5.9	37.4	6.7	1200

**WILSON**

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF TENTHS OF TOTAL SKY COVER										MEAN TENTHS OF SKY COVER	TOTAL NO. OF OBS.	
		0	1	2	3	4	5	6	7	8	9			10
JUL	01	31.0	4.5	7.7	3.9	2.6	4.5	4.5	7.1	4.5	3.2	26.5	4.7	155
	04	25.2	5.2	4.5	3.9	5.8	.6	4.5	6.5	5.8	3.2	34.8	5.5	155
	07	23.9	4.5	3.2	4.5	4.5	2.6	1.3	5.8	6.5	9.7	33.5	5.8	155
	10	18.7	5.8	6.5	3.9	3.2	3.9	3.2	7.7	11.0	5.2	31.0	5.8	155
	13	5.2	1.3	5.8	7.7	8.4	8.4	7.7	11.6	9.0	8.4	26.5	6.5	155
	16	7.7	3.2	5.2	7.1	5.2	9.0	8.4	12.9	11.6	4.5	25.2	6.3	155
	19	12.9	5.2	4.5	7.7	5.2	5.2	5.2	7.1	9.0	9.0	29.0	6.1	155
	22	29.0	3.2	8.4	5.8	1.9	1.3	6.5	3.2	7.1	5.8	27.7	5.0	155
TOTALS		19.2	4.1	5.7	5.6	4.6	4.4	5.2	7.7	8.1	6.1	29.3	5.7	1240

## SKY COVER

14793 STATION NAME  
WILLOW GROVE, PENNSYLVANIA  
73-77 PERIOD  
AUG NORTH

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF TENTHS OF TOTAL SKY COVER										MEAN TENTHS OF SKY COVER	TOTAL NO. OF OBS.
		0	1	2	3	4	5	6	7	8	9	10	
AUG	01	27.1	1.9	3.2	8.4	5.2	3.9	3.9	3.9	7.1	4.5	31.0	155
	04	20.6	3.9	4.5	5.8	3.2	3.9	3.9	7.7	3.2	3.2	40.0	155
	07	14.2	5.8	7.1	7.1	5.8	3.2	3.2	3.9	7.7	6.5	35.5	155
	10	16.8	7.1	1.9	6.5	3.2	4.5	3.2	5.2	11.0	5.8	34.8	155
	13	7.7	5.2	3.9	6.5	4.5	5.8	2.6	9.0	11.6	8.4	34.8	155
	16	5.8	5.2	5.8	8.4	6.5	9.0	3.2	9.7	5.8	5.8	34.8	155
	19	12.3	5.2	5.8	6.5	5.2	1.9	5.2	7.1	10.3	4.5	36.1	155
	22	21.9	3.2	6.5	3.2	7.1	4.5	5.8	5.2	7.7	1.9	32.9	155
TOTALS		15.8	4.7	4.8	6.6	5.1	4.6	3.9	6.5	6.1	5.1	35.0	1240

**SEP**  
**MONTH**

PERIOD

73-77

WILLOW GROVE, PENNSYLVANIA

14793  
STATION

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF TENTHS OF TOTAL SKY COVER										MEAN TENTHS OF SKY COVER	TOTAL NO. OF OBS.	
		0	1	2	3	4	5	6	7	8	9			10
SEP	01	22.0	4.7	8.0	5.3	4.0	2.7	4.7	4.0	6.0	1.3	37.3	5.6	150
	04	26.0	3.3	4.7	4.7	4.7	4.7	2.7	6.7	2.7	4.0	36.0	5.5	150
	07	15.3	6.7	6.7	4.7	2.0	2.0	2.7	8.7	8.7	5.3	37.3	6.2	150
	10	20.7	4.0	2.0	6.7	4.7		3.3	5.3	6.7	8.0	38.7	6.2	150
	13	8.0	3.3	2.0	8.7	9.3	6.0	4.0	4.7	10.0	8.7	35.3	6.7	150
	16	6.0	6.0	5.3	11.3	3.3	5.3	2.7	6.0	10.7	4.0	39.3	6.6	150
	19	10.7	4.7	7.3	8.7	6.0	2.0	5.3	7.3	4.7	3.3	40.0	6.3	150
	22	22.7	2.7	5.3	4.7	3.3	4.0	6.7	5.3	6.0	2.7	36.7	5.8	150
TOTALS		16.4	4.4	5.2	6.9	4.7	3.3	4.0	6.0	6.9	4.7	37.6	6.1	1200

# SKY COVER

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

PERIOD

OCT  
MONTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF TENTHS OF TOTAL SKY COVER										MEAN TENTHS OF SKY COVER	TOTAL NO. OF OBS.
		0	1	2	3	4	5	6	7	8	9	10	
OCT	01	38.1	2.6	3.9	2.6	3.2	2.6	1.9	1.9	4.5	1.9	36.8	155
	04	37.4	2.6	1.9	6.5	2.6	1.9	1.3	4.5	1.9	3.9	35.5	155
	07	20.0	7.1	7.7	6.5	3.9	1.3	3.9	4.5	5.2	1.9	38.1	155
	10	18.1	7.7	5.8	8.4	3.9	4.5	1.9	6.5	4.5	4.5	34.2	155
	13	15.5	7.7	3.9	5.2	7.1	3.9	2.6	5.8	9.7	2.6	36.1	155
	16	16.8	6.5	5.2	5.8	4.5	4.5	3.2	4.5	8.4	4.5	36.1	155
	19	30.3	3.2	5.8	5.8	4.5	3.9	3.9	3.9	5.2	7.1	26.5	155
	22	39.4	4.5	2.6	5.2	3.9	3.2	3.2	3.9	3.9	4.5	25.8	155
TOTALS		27.0	5.2	4.6	5.8	4.2	3.2	2.7	4.4	5.4	3.9	33.6	1240

**GOING**

MAY  
MONTH

PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF TENTHS OF TOTAL SKY COVER										MEAN TENTHS OF SKY COVER	TOTAL NO. OF OBS.	
		0	1	2	3	4	5	6	7	8	9			10
NOV	01	32.7	6.7	3.3	1.3	2.0	3.3	3.3	4.0	3.3	1.3	38.7	5.2	150
	04	36.7	2.7	4.0	4.7	4.0	.7	3.3	2.7	4.0	3.3	36.0	5.0	150
	07	14.0	6.7	12.0	3.3	4.0	2.7	4.0	8.0	4.7	4.7	36.0	5.9	150
	10	9.3	7.3	6.7	6.0	8.0	3.3	4.0	7.3	5.3	6.7	36.0	6.3	150
	13	8.0	4.0	4.0	6.0	6.0	6.0	6.7	7.3	12.7	2.0	37.3	6.7	150
	16	9.3	3.3	4.0	6.0	7.3	8.0	4.0	7.3	9.3	9.3	32.0	6.5	150
	19	26.7	6.0	3.3	7.3	2.7	2.7	4.7	6.0	7.3	2.0	31.3	5.2	150
	22	30.7	3.3	4.0	4.0	4.0	2.0	2.7	4.7	4.7	5.3	34.7	5.3	150
TOTALS		20.7	5.0	5.2	4.8	4.8	3.6	4.1	5.9	6.4	4.3	35.3	5.8	1200

DEC  
MONTH

5704 SKY COVER JAN 68

NAVWEASERVCOM

# SKY COVER

14793 WILLOW GROVE, PENNSYLVANIA 73-77

ALL NORTH

## PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF TENTHS OF TOTAL SKY COVER										MEAN TENTHS OF SKY COVER	TOTAL NO. OF OBS.
		0	1	2	3	4	5	6	7	8	9	10	
JAN	ALL	20.2	4.8	5.3	4.3	3.5	3.0	3.4	5.4	6.5	3.3	40.4	6.0 1240
FEB		24.9	5.0	6.5	4.4	2.9	3.6	3.9	5.1	5.4	3.7	36.5	5.6 1128
MAR		17.2	4.5	2.9	4.2	2.7	3.4	2.2	4.9	6.0	5.2	47.0	6.6 1240
APR		24.8	3.9	3.5	4.8	3.8	3.2	3.9	6.8	6.4	5.0	33.9	5.6 1200
MAY		16.5	4.0	4.3	6.9	3.7	4.0	3.3	5.3	7.0	4.3	40.9	6.3 1240
JUN		10.9	3.2	4.3	5.5	5.7	4.2	4.8	7.6	10.3	5.9	37.4	6.7 1200
JUL		19.2	4.1	5.7	5.6	4.6	4.4	5.2	7.7	8.1	6.1	29.3	5.7 1240
AUG		15.8	4.7	4.8	6.6	5.1	4.6	3.9	6.5	8.1	5.1	35.0	6.1 1240
SEP		16.4	4.4	5.2	6.9	4.7	3.3	4.0	6.0	6.9	4.7	37.6	6.1 1200
OCT		27.0	5.2	4.6	5.8	4.2	3.2	2.7	4.4	5.4	3.9	33.6	5.3 1240
NOV		20.7	5.0	5.2	4.8	4.8	3.6	4.1	5.9	6.4	4.3	35.3	5.8 1200
DEC		16.8	6.5	5.2	3.4	3.5	2.8	3.2	3.5	5.0	3.9	46.4	6.4 1240
TOTALS		19.2	4.6	4.6	5.3	4.1	3.6	3.7	5.8	6.8	4.6	37.8	6.0 14608

## PART E PSYCHROMETRIC SUMMARIES

In this section are presented various summaries of dry- and wet-bulb temperatures, dew points, and relative humidity. The order and manner of presentation follows:

1. Cumulative percentage frequency of occurrence - derived from daily observations and presented by month and annual for all years combined. These tabulations provide the cumulative percentage frequency to tenths of temperature by 5-degree Fahrenheit increments, plus mean temperature, standard deviation, and total number of observations in three separate tables as follows:
  - a. Daily maximum temperature
  - b. Daily minimum temperature
  - c. Daily mean temperature
2. Extreme values - derived from daily observations with extreme value given for each year and month of record available. Extremes are provided for a month if all days for a month contain valid observations. All months for a year must have valid extremes before the ANNUAL value is selected for that year. Means and standard deviations are computed for months and annual when four or more values are present for any column. Two tables of daily extreme temperatures are prepared:
  - a. Extreme maximum temperature
  - b. Extreme minimum temperature

NOTE: A supplementary list also provides extreme temperatures when less than a full month is reported.
3. Bivariate percentage frequency distribution and computations of dry-bulb versus wet-bulb temperature.  
This tabulation is derived from 3-hourly observations and is presented by month and annual, all hours and all years combined. The following information is provided:
  - a. The main body of the summary consists of a bivariate percentage frequency distribution of wet-bulb depression in 17 classes spread horizontally; by 2-degree intervals of dry-bulb temperature vertically. Also provided for each dry-bulb temperature interval is the total no. of observations with dry-bulb and wet-bulb temperature combined; and again for dry-bulb, wet-bulb, and dew-point temperatures separately. Total observations for these four items is also provided in two lines at end of each tabulation table, which may require two pages in some cases.

NOTE: A percentage frequency in this table of ".0" represents one or more occurrences amounting to less than .05 percent.

b. Statistical data for the individual elements of relative humidity, dry-bulb, wet-bulb, and dew-point temperatures are shown in the section at the bottom left of the forms. These consist of the sum of squares ( $\sum X^2$ ), sums of values ( $\sum X$ ), means ( $\bar{X}$ ), and standard deviations ( $\sigma_X$ ). The number of observations used in the computations for each element is also shown.

c. At the lower right of the form are given the mean number of hours of occurrence for six ranges of dry-bulb, wet-bulb, and dew-point temperatures, and total number of hours possible in the period represented. Mean number of hours is shown to tenths and indicates mean number of hours per year in the annual summary, or mean number of hours per month in the tabulations by month.

NOTE: Wet-bulb temperature usually was not reported prior to 1946. Relative humidity usually was not reported prior to 1949, nor subsequent to June 1958; and was computed by machine methods for observations recorded during these periods. All values of dew-point temperature and relative humidity are with respect to water, unless otherwise indicated.

4. Means and standard deviations - These tabulations are derived from hourly observations and present the mean, standard deviation, and total number of observations for the eight standard 3-hour groups, by month and annual and again at the bottom for all hours combined. Records for all years available are combined. Tables are prepared for the following:

- a. Dry-bulb temperature
- b. Wet-bulb temperature
- c. Dew-point temperature

5. Cumulative percentage frequency of occurrence of relative humidity - This summary is derived from hourly observations and presents the cumulative percentage frequency of occurrence of relative humidity by increments of 10% classes, plus the mean relative humidity and total number of observations in two tables.

- a. Table 1 is prepared by month and annual, all years combined, with month being the vertical argument.
- b. Table 2 is prepared by month by standard 3-hour groups, with the hour groups being the vertical argument and a separate page for each month. All years are also combined for this summary.

6. Percentage frequency of occurrence of dry-bulb temperature versus wind direction - This tabulation is derived from hourly observations and is presented by month and annual, all hours and years combined. The main body of the summary consists of dry bulb temperatures spread vertically in four degree increments and horizontally by eight wind directions (plus calm).

# DAILY TEMPERATURES

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

45-62.6 65-77  
YEARS

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM DAILY OBSERVATIONS)

MAXIMUM

TEMP (°F)	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ANNUAL
100							1.3	1.1	.1				.0
95						1.3	4.7	1.9	.4				.7
90						9.8	18.3	12.1	3.4				3.7
85						31.5	49.5	39.1	15.2	.4			12.0
80						56.8	80.9	69.8	32.6	5.5	.3		22.5
75						74.7	94.7	87.9	57.1	15.3	1.6		31.8
70						88.9	99.0	97.3	76.8	32.3	4.7	.2	40.3
65						95.4	99.8	99.8	90.1	52.5	12.0	1.4	47.8
60						98.7	100.0	100.0	97.3	72.8	25.9	5.9	55.6
55						99.8			99.4	89.2	40.7	11.8	62.9
50						100.0			100.0	95.8	59.3	22.9	70.0
45						99.8				98.9	77.7	35.0	77.0
40						100.0				100.0	90.4	55.9	84.5
35											97.2	74.1	91.5
30											99.4	88.9	96.0
25											99.9	95.7	98.3
20											100.0	99.4	99.4
15											100.0	100.0	99.9
10													100.0
5													100.0
MEAN	37.8	40.0	48.6	61.0	70.3	79.8	84.3	82.4	75.6	65.2	52.4	41.5	61.6
S. D.	10.844	10.333	11.241	10.517	9.141	8.124	5.900	6.222	8.260	8.852	9.934	10.291	18.897
TOTAL OBS.	923	874	955	898	927	898	907	929	899	915	897	884	10906

NAVWEASERVCOM

1969 Jan 21 Daily Temperature

# DAILY TEMPERATURES

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

45-62, 65-77  
YEARS

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM DAILY OBSERVATIONS)

MINIMUM

TEMP (°F)	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ANNUAL
75						6.7	1.1	1.0					.2
70					3	6.7	24.0	17.7	6.2	.3			4.8
65				.1	2.8	29.4	59.9	49.4	19.5	1.4	.1		13.6
60			.3	1.2	12.4	54.2	84.1	77.9	37.7	6.7	1.3		23.1
55	.1		1.4	5.5	30.0	79.8	98.3	93.2	61.8	18.1	4.3	.3	32.8
50	.4	.2	3.1	13.9	54.4	94.3	100.0	98.8	80.3	35.5	9.3	.8	41.0
45	1.3	.8	7.1	28.4	78.4	99.3		100.0	92.4	56.6	18.1	2.8	48.9
40	4.6	3.3	16.2	56.2	94.8	99.9			98.6	77.8	34.6	7.8	58.0
35	13.4	12.6	35.8	80.7	99.0	100.0			99.9	90.6	55.3	21.6	67.6
30	29.0	33.9	63.8	95.9	99.9				100.0	97.9	77.5	42.2	78.5
25	48.4	55.8	82.3	99.2	100.0					100.0	92.5	62.6	86.8
20	65.4	71.3	93.4	100.0							98.3	79.0	92.4
15	81.1	84.4	97.7								99.8	90.6	96.2
10	91.5	94.1	99.6								100.0	97.5	98.6
5	96.9	98.5	99.9									99.7	99.6
0	99.5	99.7	100.0									99.8	99.9
5-	99.9	100.0										100.0	100.0
10-	100.0												100.0
MEAN	23.5	24.7	31.9	41.0	50.6	60.3	65.3	63.8	56.8	46.3	36.6	27.3	44.0
S. D.	9.919	9.098	8.577	7.482	7.235	6.653	5.111	5.804	8.114	8.611	9.117	9.220	16.769
TOTAL OBS.	923	874	959	898	927	898	907	928	899	913	890	883	10895

NAVWEASERVCOM

5721 Daily Temperatures Jan 19

# DAILY TEMPERATURES

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

45-62, 65-77  
YEARS

MEAN

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM DAILY OBSERVATIONS)

TEMP (°F)	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ANNUAL
85						9	2.2	1.4	.2				.4
80				.1	.4	7.7	16.9	12.8	3.4				3.6
75				.3	2.9	31.0	55.1	42.6	16.6	.9			12.5
70			.3	1.9	13.6	54.7	87.1	74.1	33.9	4.7	.4		22.6
65			1.4	8.6	31.1	78.7	99.2	95.4	59.4	16.5	2.1		32.8
60	.2	.2	3.5	17.8	56.9	93.8	99.9	99.4	81.2	33.5	6.3	.2	41.2
55	1.2	.7	8.3	32.0	78.6	98.9	100.0	100.0	94.3	55.1	14.2	1.6	48.9
50	2.7	3.9	15.9	54.7	94.4	99.9			98.8	78.3	29.8	5.5	57.1
45	9.4	9.5	29.6	79.4	98.9	100.0			100.0	91.9	48.0	14.4	65.2
40	19.2	20.9	51.3	94.5	99.9					97.8	69.9	30.2	73.8
35	35.8	43.5	73.4	99.0	100.0					99.9	87.9	50.7	82.6
30	55.6	64.6	90.3	100.0						100.0	96.4	71.0	89.9
25	74.2	81.6	97.1								99.6	85.1	94.8
20	86.9	91.4	99.2								99.9	94.6	97.7
15	94.6	97.1	100.0								100.0	98.8	99.2
10	98.4	99.4										99.9	99.8
5	99.7	100.0										100.0	100.0
0	100.0												100.0
MEAN	30.9	32.6	40.5	51.3	60.8	70.3	75.1	73.4	66.4	56.0	44.8	34.6	53.1
S. D.	9.938	9.189	9.320	8.347	7.458	6.766	4.794	5.323	7.578	8.132	9.021	9.276	17.550
TOTAL OBS.	923	874	955	898	926	898	907	928	899	913	890	883	10894

NAVWEASERVCOM

5721 Daily Temperatures Jan 1969

# DAILY AVERAGE/EXTREME TEMPERATURES

14793 STATION WILLOW GROVE, PENNSYLVANIA 1946-1962 1965-1977 JANUARY MONTH  
STATION NAME YEARS

DAY	MEAN TEMP		AVERAGE		MAXIMUM TEMP		EXTREME		AVERAGE		EXTREME		MINIMUM TEMP		EXTREME		DATE
	° F	° C	° F	° C	° F	° C	° F	° C	° F	° C	° F	° C	° F	° C	° F	° C	
1	32.5	0.3	40.2	4.6	62	16.7	1973	1973	24.7	-4.1	9	-12.8	1977*	1977*	1977*	1977*	1977*
2	30.8	-0.7	37.7	3.2	54	12.2	1955	1955	24.0	-4.4	1	-17.2	1968	1968	1968	1968	1968
3	33.1	0.6	39.5	4.2	57	13.9	1950	1950	26.7	-2.9	14	-10.0	1977	1977	1977	1977	1977
4	32.8	0.4	39.6	4.2	66	18.9	1950	1950	26.1	-3.3	10	-12.2	1958	1958	1958	1958	1958
5	30.7	-0.7	37.3	2.9	62	16.7	1950	1950	24.0	-4.4	7	-13.9	1968	1968	1968	1968	1968
6	31.8	-0.1	38.9	3.8	67	19.4	1950	1950	24.7	-4.1	4	-15.6	1968	1968	1968	1968	1968
7	32.0	0.0	38.5	3.6	66	18.9	1946	1946	23.6	-3.6	9	-12.8	1968	1968	1968	1968	1968
8	28.4	-2.0	34.6	1.4	57	13.9	1949	1949	22.2	-5.4	1	-17.2	1970	1970	1970	1970	1970
9	28.3	-2.1	34.9	1.6	57	13.9	1965	1965	21.8	-5.7	0	-17.8	1970*	1970*	1970*	1970*	1970*
10	30.5	-0.8	37.3	2.9	61	16.1	1950	1950	23.7	-4.6	2	-16.7	1970	1970	1970	1970	1970
11	30.2	-1.0	36.9	2.7	67	19.4	1975	1975	23.5	-4.7	4	-15.6	1968	1968	1968	1968	1968
12	29.2	-1.6	36.0	2.2	56	13.3	1975	1975	22.4	-5.3	-1	-18.3	1968	1968	1968	1968	1968
13	29.3	-1.5	36.7	2.6	62	16.7	1972	1972	22.0	-5.6	4	-15.6	1977	1977	1977	1977	1977
14	31.3	-0.4	38.7	3.7	62	16.7	1972	1972	24.0	-4.4	6	-14.4	1954	1954	1954	1954	1954
15	31.2	-0.4	38.3	3.5	59	15.0	1962	1962	24.1	-4.4	0	-17.8	1965	1965	1965	1965	1965
16	29.3	-1.5	36.7	2.6	60	15.6	1953	1953	22.0	-5.6	1	-17.2	1977	1977	1977	1977	1977
17	28.0	-2.2	35.9	2.2	62	16.7	1973	1973	20.2	-6.6	-6	-21.1	1977	1977	1977	1977	1977
18	28.8	-1.8	37.0	2.8	65	18.3	1973	1973	20.5	-6.4	-4	-20.0	1977	1977	1977	1977	1977
19	28.8	-1.8	37.2	2.9	63	17.2	1951	1951	20.3	-6.5	3	-16.1	1977	1977	1977	1977	1977
20	30.1	-1.1	37.5	3.1	62	16.7	1951	1951	22.7	-5.2	7	-13.9	1946	1946	1946	1946	1946
21	30.7	-0.7	38.2	3.4	63	17.2	1959	1959	23.3	-4.8	4	-15.6	1961	1961	1961	1961	1961
22	32.9	0.5	40.9	4.9	64	17.8	1959	1959	24.9	-3.9	3	-16.1	1970	1970	1970	1970	1970
23	31.7	-0.2	39.5	4.2	63	17.2	1967	1967	23.8	-4.6	5	-15.0	1961	1961	1961	1961	1961
24	31.5	-0.3	38.1	3.4	68	20.0	1967	1967	23.0	-3.9	5	-15.0	1948	1948	1948	1948	1948
25	33.2	0.7	40.2	4.6	67	19.4	1967	1967	26.3	-3.2	4	-15.6	1961	1961	1961	1961	1961
26	33.7	0.9	41.4	5.2	73	22.8	1950	1950	26.0	-3.3	6	-14.4	1961	1961	1961	1961	1961
27	32.3	0.2	39.6	4.2	67	19.4	1974	1974	23.0	-3.9	9	-12.8	1971	1971	1971	1971	1971
28	29.2	-1.6	36.1	2.3	60	15.6	1947	1947	22.4	-5.3	5	-15.0	1966*	1966*	1966*	1966*	1966*
29	29.2	-1.6	36.2	2.3	63	17.2	1975	1975	22.3	-5.4	-2	-18.9	1977	1977	1977	1977	1977
30	30.0	-1.1	37.1	2.8	68	20.0	1947	1947	23.0	-5.0	5	-15.0	1952	1952	1952	1952	1952
31	28.0	-2.2	35.0	1.7	59	15.0	1974	1974	21.0	-6.1	-3	-19.4	1948	1948	1948	1948	1948
Monthly	30.6	-0.8	37.8	3.2	73	22.8	1950	1950	23.5	-4.7	-6	-21.1	1977	1977	1977	1977	1977

\*ALSO ON EARLIER YEARS

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

# DAILY AVERAGE/EXTREME TEMPERATURES

5725 DAILY AVERAGE/EXTREME TEMP MAR 1977

14793

WILLOW GROVE, PENNSYLVANIA

1945-1962 1965-1977

FEBRUARY

STATION

STATION NAME

YEARS

MONTH

DAY	MEAN TEMP		AVERAGE		MAXIMUM TEMP		AVERAGE		EXTREME		DATE		AVERAGE		MINIMUM TEMP		EXTREME		DATE	
	° F	° C	° F	° C	° F	° C	° F	° C	° F	° C			° F	° C	° F	° C				
1	28.4	-2.0	35.0	1.7	50	10.0	21.7	-5.7	4	-15.6	1976*		21.7	-5.7	4	-15.6	1976*		1976*	1961
2	28.6	-1.9	35.3	1.8	57	13.9	21.8	-5.7	-4	-20.0	1967		21.8	-5.7	-4	-20.0	1967		1967	1961
3	27.1	-2.7	34.1	1.2	54	12.2	20.0	-6.7	1	-17.2	1970		20.0	-6.7	1	-17.2	1970		1970	1955
4	29.1	-1.6	36.5	2.5	54	12.2	21.6	-5.7	6	-14.4	1962		21.6	-5.7	6	-14.4	1962		1962	1965
5	29.7	-1.3	37.0	2.8	57	13.9	22.5	-5.3	3	-16.1	1962		22.5	-5.3	3	-16.1	1962		1962	1947
6	31.4	-0.3	38.8	3.8	56	13.3	23.9	-4.5	5	-15.0	1960		23.9	-4.5	5	-15.0	1960		1960	1977
7	30.8	-0.7	37.9	3.3	53	11.7	23.6	-4.7	8	-13.3	1965*		23.6	-4.7	8	-13.3	1965*		1965*	1977
8	29.8	-1.2	36.7	2.6	60	15.6	22.9	-5.1	5	-15.0	1965		22.9	-5.1	5	-15.0	1965		1965	1967
9	29.8	-1.2	37.0	2.8	59	15.0	22.6	-5.2	2	-16.7	1949		22.6	-5.2	2	-16.7	1949		1949	1967
10	30.9	-0.6	38.0	3.3	60	15.6	23.7	-4.6	1	-17.2	1960		23.7	-4.6	1	-17.2	1960		1960	1948
11	36.3	2.4	39.7	4.3	62	16.7	32.9	0.5	-1	-18.3	1960		32.9	0.5	-1	-18.3	1960		1960	1962
12	30.3	-0.9	38.4	3.6	53	11.7	22.3	-3.4	8	-13.3	1971*		22.3	-3.4	8	-13.3	1971*		1971*	1967
13	31.9	-0.1	39.3	4.1	64	17.8	24.6	-4.1	-1	-18.3	1951		24.6	-4.1	-1	-18.3	1951		1951	1967
14	33.0	0.6	40.8	4.9	64	17.8	25.3	-3.7	11	-11.7	1946		25.3	-3.7	11	-11.7	1946		1946	1958*
15	34.4	1.3	42.5	5.8	73	22.8	26.2	-3.2	11	-11.7	1949		26.2	-3.2	11	-11.7	1949		1949	1946
16	33.8	1.0	41.5	5.3	71	21.7	26.0	-3.3	8	-13.3	1954		26.0	-3.3	8	-13.3	1954		1954	1973
17	33.1	0.6	40.0	4.4	65	18.3	26.2	-3.2	4	-15.6	1976		26.2	-3.2	4	-15.6	1976		1976	1973*
18	33.9	1.1	41.9	5.5	58	14.4	25.8	-3.4	5	-15.0	1948		25.8	-3.4	5	-15.0	1948		1948	1958
19	34.4	1.3	42.5	5.8	65	18.3	26.2	-3.2	10	-12.2	1948		26.2	-3.2	10	-12.2	1948		1948	1959*
20	31.9	-0.1	39.9	4.4	60	15.6	23.9	-4.5	6	-14.4	1949		23.9	-4.5	6	-14.4	1949		1949	1966
21	31.3	-0.4	38.7	3.7	69	20.6	23.9	-4.5	4	-15.6	1953		23.9	-4.5	4	-15.6	1953		1953	1968
22	33.3	0.7	41.7	5.4	67	19.4	24.9	-3.9	5	-15.0	1974		24.9	-3.9	5	-15.0	1974		1974	1968
23	33.5	0.8	40.6	4.8	67	19.4	26.4	-3.1	9	-12.8	1977		26.4	-3.1	9	-12.8	1977		1977	1972
24	34.7	1.5	43.2	6.2	66	18.9	26.3	-3.2	13	-10.6	1961		26.3	-3.2	13	-10.6	1961		1961	1947
25	37.8	3.2	46.6	8.1	67	19.4	29.0	-1.7	11	-11.7	1976		29.0	-1.7	11	-11.7	1976		1976	1967
26	36.7	2.6	44.0	6.7	62	16.7	29.3	-1.5	8	-13.3	1951		29.3	-1.5	8	-13.3	1951		1951	1970
27	37.5	3.1	46.4	8.0	66	18.9	28.7	-1.8	8	-13.3	1977		28.7	-1.8	8	-13.3	1977		1977	1950
28	36.4	2.4	44.6	7.0	66	18.9	26.2	-2.1	13	-10.6	1976		26.2	-2.1	13	-10.6	1976		1976	1950
29	38.1	3.4	45.3	7.4	68	20.0	31.0	-0.6	22	-5.6	1976		31.0	-0.6	22	-5.6	1976		1976	1956
30																				
31																				
Monthly	32.5	0.3	40.0	4.4	73	22.8	25.1	-3.8	-4	-20.0	1949		25.1	-3.8	-4	-20.0	1949		1949	1961

\*ALSO ON EARLIER YEARS

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

# DAILY AVERAGE/EXTREME TEMPERATURES

14793

WILLOW GROVE, PENNSYLVANIA

1945-1962 1965-1977

MARCH

STATION

STATION NAME

YEARS

MONTH

DAY	MEAN TEMP		MAXIMUM TEMP				MINIMUM TEMP					
	AVERAGE		AVERAGE		EXTREME		AVERAGE		EXTREME			
	° F	° C	° F	° C	° F	° C	° F	° C	° F	° C		
1	35.9	2.2	43.7	6.5	71	21.7	1972	28.0	-2.2	13	-10.6	1962*
2	35.8	2.1	43.5	6.4	73	22.8	1972	28.1	-2.2	8	-13.3	1950
3	36.8	2.7	44.4	6.9	64	17.8	1972*	29.1	-1.6	8	-13.3	1950
4	36.5	2.5	44.1	6.7	76	24.4	1974	28.9	-1.7	10	-12.2	1950
5	39.1	3.9	47.6	8.7	75	23.9	1976	30.6	-0.8	10	-12.2	1948
6	37.5	3.1	45.3	7.4	63	17.2	1959	29.8	-1.2	11	-11.7	1948
7	37.8	3.2	45.4	7.4	70	21.1	1946	30.2	-1.0	10	-12.2	1960
8	35.9	2.2	44.2	6.8	65	18.3	1950	27.5	-2.5	11	-11.7	1960
9	36.3	2.4	44.6	7.0	64	17.8	1977	28.0	-2.2	12	-11.1	1960
10	38.3	3.5	46.3	7.9	70	21.1	1955	30.2	-1.0	16	-8.9	1960
11	38.2	3.4	46.2	7.9	69	20.6	1977*	30.1	-1.1	10	-12.2	1960
12	38.8	3.8	46.8	8.2	65	18.3	1977	30.7	-0.7	14	-10.0	1960
13	39.3	4.1	47.0	8.3	68	20.0	1946	31.5	-0.3	0	-17.8	1958
14	40.9	4.9	48.5	9.2	76	24.4	1957	33.2	0.7	20	-6.7	1968
15	41.3	5.2	49.6	9.8	69	20.6	1945	33.0	0.6	20	-6.7	1960
16	40.8	4.9	49.2	9.6	80	26.7	1945	32.5	0.3	19	-7.2	1949
17	38.9	3.8	46.7	8.2	82	27.8	1945	31.1	-0.5	16	-8.9	1967
18	37.6	3.1	45.4	7.4	67	19.4	1969	29.9	-1.2	10	-12.2	1967
19	39.8	4.3	47.8	8.8	74	23.3	1945	31.8	-0.1	6	-14.4	1967
20	42.3	5.7	51.1	10.6	81	27.2	1945	33.5	0.8	14	-10.0	1949
21	42.5	5.8	51.4	10.8	81	27.2	1948	33.5	0.8	12	-11.1	1965
22	41.8	5.4	49.8	9.9	76	24.4	1948	33.7	0.9	20	-6.7	1965
23	42.5	5.8	51.5	10.8	68	20.0	1953*	33.4	0.8	20	-6.7	1959
24	43.7	6.5	53.2	11.8	69	20.6	1959	34.1	1.2	22	-5.6	1956
25	41.3	5.2	50.0	10.0	74	23.3	1959	32.7	0.4	18	-7.8	1956
26	42.9	6.1	52.1	11.2	70	21.1	1976	33.7	0.9	20	-6.7	1960
27	44.3	6.8	53.5	11.9	76	24.4	1949	35.2	1.8	22	-5.6	1955
28	45.5	7.5	55.0	12.8	81	27.2	1945	35.9	2.2	21	-6.1	1966
29	46.2	7.9	56.2	13.4	85	29.4	1945	36.2	2.3	20	-6.7	1959
30	45.8	7.7	54.1	12.3	81	27.2	1977	37.5	3.1	17	-8.3	1970
31	45.1	7.3	53.5	11.9	76	24.4	1945	36.7	2.6	22	-5.6	1969
Monthly	40.3	4.6	48.6	9.2	85	29.4	1945	31.9	-0.1	0	-17.8	1958

\*ALSO ON EARLIER YEARS

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

# DAILY AVERAGE/EXTREME TEMPERATURES

5725 DAILY AVERAGE/EXTREME TEMP MAR 1978

14793

WILLOW GROVE, PENNSYLVANIA

1945-1962 1965-1977

APRIL

STATION

STATION NAME

YEARS

MONTH

DAY	MEAN TEMP		MAXIMUM TEMP				MINIMUM TEMP					
	AVERAGE		AVERAGE		EXTREME		AVERAGE		EXTREME			
	° F	° C	° F	° C	° F	° C	° F	° C	° F	° C		
1	47.9	8.8	58.4	14.7	76	24.4	1946	37.5	3.1	22	-5.6	1965
2	48.7	9.3	57.6	14.2	81	27.2	1967	39.8	4.3	31	-0.6	1954
3	47.0	8.3	56.4	13.6	75	23.9	1967	37.6	3.1	25	-3.9	1954
4	46.7	8.2	55.4	13.0	76	24.4	1950	37.9	3.3	22	-5.6	1954
5	46.8	8.2	57.1	13.9	69	20.6	1974*	36.5	2.5	25	-3.9	1975
6	47.2	8.4	55.9	13.3	80	26.7	1947	38.5	3.6	28	-2.2	1950
7	46.2	7.9	55.7	13.2	78	25.6	1954	36.8	2.7	24	-4.4	1950
8	45.4	7.4	54.8	12.7	83	28.3	1959	36.0	2.2	23	-5.0	1972
9	46.7	8.2	57.6	14.2	82	27.8	1959	35.9	2.2	24	-4.4	1977
10	47.4	8.6	58.1	14.5	77	25.0	1955	36.7	2.6	25	-3.9	1950
11	48.2	9.0	58.6	14.8	82	27.8	1955	37.9	3.3	29	-1.7	1970*
12	49.5	9.7	59.7	15.4	84	28.9	1977	39.4	4.1	27	-2.8	1976
13	48.4	9.1	58.3	14.6	82	27.8	1977	38.5	3.6	26	-3.3	1950
14	51.0	10.6	61.9	16.6	86	30.0	1960	40.0	4.4	22	-5.6	1950
15	52.4	11.3	62.8	17.1	84	28.9	1960	42.0	5.6	29	-1.7	1950
16	51.9	11.1	62.6	17.0	80	26.7	1976	41.2	5.1	29	-1.7	1950
17	52.7	11.5	63.1	17.3	89	31.7	1976	42.4	5.8	31	-0.6	1949
18	54.7	12.6	65.3	18.5	93	33.9	1976	44.1	6.7	33	0.6	1948
19	55.2	12.9	65.8	18.8	90	32.2	1976	44.6	7.0	34	1.1	1960*
20	53.7	12.1	63.9	17.7	88	31.1	1976	43.4	6.3	33	0.6	1961*
21	54.6	12.6	65.8	18.8	85	29.4	1957	43.5	6.4	29	-1.7	1956
22	56.3	13.5	66.3	19.1	83	28.3	1977	46.2	7.9	28	-2.2	1975
23	56.0	13.3	66.4	19.1	89	31.7	1960	45.6	7.6	33	0.6	1947
24	53.4	11.9	62.8	17.1	85	29.4	1960	44.0	6.7	35	1.7	1956
25	53.2	11.8	62.5	16.9	89	31.7	1960	43.8	6.6	31	-0.6	1956
26	54.3	12.4	63.9	17.7	80	26.7	1957	44.8	7.1	34	1.1	1972
27	52.1	11.2	60.8	16.0	90	32.2	1957	43.3	6.3	33	0.6	1967
28	52.2	11.2	61.1	16.2	89	31.7	1957	43.3	6.3	31	-0.6	1946
29	55.4	13.0	65.5	18.6	85	29.4	1974	45.3	7.4	35	1.7	1948
30	55.6	13.1	66.8	19.3	83	28.3	1974	44.4	6.9	37	2.8	1977*
31												
Monthly	51.0	10.6	61.0	16.1	93	33.9	1976	41.0	5.0	22	-5.6	1965*

\*ALSO ON EARLIER YEARS

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

# DAILY AVERAGE/EXTREME TEMPERATURES

14793

WILLOW GROVE, PENNSYLVANIA

1945-1962 1965-1977

MAY

STATION

STATION NAME

YEARS

MONTH

DAY	MEAN TEMP		MAXIMUM TEMP			MINIMUM TEMP		
	AVERAGE ° F	AVERAGE ° C	AVERAGE ° F	EXTREME ° F	EXTREME ° C	AVERAGE ° F	EXTREME ° F	EXTREME ° C
1	57.0	13.9	67.5	82	27.8	46.5	36	2.2
2	56.8	13.8	66.1	81	27.2	47.5	36	2.2
3	56.5	13.6	65.8	85	29.4	47.3	34	1.1
4	55.8	13.2	65.4	86	30.0	46.2	33	0.6
5	56.1	13.4	66.7	87	30.6	45.5	33	0.6
6	58.3	14.6	69.3	90	32.2	47.3	38	3.3
7	56.4	13.6	67.2	89	31.7	45.7	35	1.7
8	56.0	13.3	66.1	82	27.8	46.0	32	0.0
9	56.5	13.6	67.2	86	30.0	45.9	29	-1.7
10	58.9	14.9	69.2	89	31.7	48.5	33	0.6
11	59.4	15.2	69.4	89	31.7	49.4	33	0.6
12	61.1	16.2	71.6	90	32.2	50.9	37	2.8
13	61.0	16.1	71.1	88	31.1	51.0	37	2.8
14	59.5	15.3	70.4	86	30.0	49.2	38	3.3
15	61.3	16.3	71.6	86	30.0	51.0	41	5.0
16	61.6	16.4	72.2	90	32.2	51.0	39	3.9
17	63.0	17.2	73.8	89	31.7	52.1	34	1.1
18	61.9	16.6	71.1	88	31.1	52.7	40	4.4
19	62.2	16.8	71.6	86	30.0	52.9	37	2.8
20	61.8	16.6	71.0	87	30.6	52.6	44	6.7
21	62.9	17.2	72.6	84	28.9	53.3	43	6.1
22	63.1	17.3	73.8	89	31.7	52.4	42	5.6
23	63.7	17.6	73.8	87	30.6	53.6	43	6.1
24	62.5	16.9	72.2	87	30.6	52.9	39	3.9
25	62.2	16.8	71.2	84	28.9	53.2	38	3.3
26	63.0	17.2	72.5	88	31.1	53.5	41	5.0
27	61.9	16.6	71.1	89	31.7	52.7	37	2.8
28	63.5	17.5	74.3	91	32.8	52.8	43	6.1
29	64.1	17.8	73.3	92	33.3	54.9	42	5.6
30	63.3	17.4	72.7	88	31.1	53.9	41	5.0
31	65.1	18.4	75.1	91	32.8	55.2	43	6.1
Monthly	60.5	15.8	70.5	92	33.3	50.6	29	-1.7

\*ALSO ON EARLIER YEARS

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

# DAILY AVERAGE/EXTREME TEMPERATURES

5725 DAILY AVERAGE/EXTREME TEMP MAR 1972

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

1945-1962 1965-1977  
YEARS

JUNE  
MONTH

DAY	MEAN TEMP		AVERAGE		MAXIMUM TEMP		EXTREME		AVERAGE		MINIMUM TEMP		EXTREME		DATE
	° F	° C	° F	° C	° F	° C	° F	° C	° F	° C	° F	° C	° F	° C	
1	66.1	18.9	75.7	24.3	90	32.2	1951	13.7	56.6	13.7	43	6.1	1943	6.1	1943
2	66.1	18.9	75.8	24.3	88	31.1	1970*	13.6	56.5	13.6	45	7.2	1966*	7.2	1966*
3	66.1	18.9	75.7	24.3	89	31.7	1970	13.6	56.5	13.6	47	8.3	1976	8.3	1976
4	66.3	19.1	76.9	24.9	87	30.6	1951	13.2	55.7	13.2	45	7.2	1969	7.2	1969
5	67.5	19.7	77.8	25.4	88	31.1	1966*	14.0	57.2	14.0	47	8.3	1946	8.3	1946
6	68.1	20.1	79.0	26.1	91	32.8	1953	14.1	57.3	14.1	44	6.7	1945	6.7	1945
7	68.7	20.4	79.1	26.2	90	32.2	1971	14.6	58.3	14.6	42	5.6	1958	5.6	1958
8	68.0	20.0	78.7	25.9	91	32.8	1971*	14.1	57.3	14.1	45	7.2	1977	7.2	1977
9	69.6	20.9	78.9	26.1	94	34.4	1959	15.7	60.3	15.7	45	7.2	1957	7.2	1957
10	68.4	20.2	78.7	25.9	94	34.4	1959	14.6	58.2	14.6	46	7.8	1972*	7.8	1972*
11	69.1	20.6	79.8	26.6	91	32.8	1973	14.6	58.3	14.6	39	3.9	1972	3.9	1972
12	70.8	21.6	81.4	27.4	90	32.2	1967*	15.7	60.2	15.7	46	7.8	1972	7.8	1972
13	70.0	21.1	78.6	25.9	95	35.0	1961	16.3	61.3	16.3	50	10.0	1952	10.0	1952
14	68.4	20.2	77.4	25.2	96	35.6	1956	15.2	59.4	15.2	48	8.9	1965	8.9	1965
15	69.0	20.6	78.5	25.8	96	35.6	1957	15.3	59.5	15.3	43	8.9	1953	8.9	1953
16	69.5	20.8	78.5	25.8	99	37.2	1957	15.9	60.6	15.9	49	9.4	1961	9.4	1961
17	70.1	21.2	79.8	26.6	97	36.1	1957	15.8	60.5	15.8	49	9.4	1954	9.4	1954
18	68.9	20.5	78.8	26.0	98	36.7	1957	15.1	59.1	15.1	44	6.7	1950	6.7	1950
19	69.5	20.8	78.5	25.8	91	32.8	1957	15.8	60.5	15.8	50	10.0	1956	10.0	1956
20	70.2	21.2	80.0	26.7	92	33.3	1953	15.8	60.4	15.8	46	7.8	1956	7.8	1956
21	70.9	21.6	79.7	26.5	94	34.4	1953*	16.7	62.1	16.7	49	9.4	1968	9.4	1968
22	71.4	21.9	80.5	26.9	90	32.2	1956*	16.8	62.3	16.8	51	10.6	1977	10.6	1977
23	71.8	22.1	81.7	27.6	93	33.9	1965*	16.6	61.9	16.6	49	9.4	1972	9.4	1972
24	73.1	22.8	83.8	28.8	92	33.3	1975*	16.9	62.4	16.9	53	11.7	1972*	11.7	1972*
25	74.2	23.4	83.4	28.6	97	36.1	1952	18.3	65.0	18.3	55	12.8	1972	12.8	1972
26	73.6	23.1	83.1	28.4	99	37.2	1952	17.8	64.1	17.8	54	12.2	1965	12.2	1965
27	73.7	23.2	83.8	28.8	95	35.0	1966	17.6	63.6	17.6	49	9.4	1965	9.4	1965
28	73.2	22.9	83.2	28.4	93	33.9	1969*	17.4	63.3	17.4	50	10.0	1970	10.0	1970
29	73.6	23.1	83.5	28.6	96	35.6	1959	17.7	63.8	17.7	48	8.9	1970	8.9	1970
30	75.1	23.9	84.8	29.3	97	36.1	1959	18.6	65.4	18.6	54	13.3	1954	13.3	1954
31															
Monthly	70.0	21.1	79.8	26.6	99	37.2	1957*	15.7	60.3	15.7	39	3.9	1972	3.9	1972

\*ALSO ON EARLIER YEARS

DIRNAVOCEANMET-SMOS

## DAILY AVERAGE/EXTREME TEMPERATURES

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

14793

WILLOW GROVE, PENNSYLVANIA

1945-1962 1965-1977

JULY

STATION

STATION NAME

YEARS

MONTH

DAY	MEAN TEMP		MAXIMUM TEMP				MINIMUM TEMP					
	AVERAGE		AVERAGE		EXTREME		AVERAGE		EXTREME			
	° F	° C	° F	° C	° F	° C	° F	° C	° F	° C		
1	75.3	24.1	85.3	29.6	96	35.6	1945	65.3	18.5	53	12.8	1952
2	75.3	24.1	86.1	30.1	99	37.2	1966	64.4	18.0	52	11.1	1969
3	75.4	24.1	86.1	30.1	102	38.9	1966	64.8	18.2	53	11.7	1957
4	74.1	23.4	84.0	28.9	98	36.7	1966*	64.1	17.8	54	12.2	1969
5	73.2	22.9	82.2	27.9	97	36.1	1955	64.1	17.8	53	12.8	1967
6	73.1	22.8	82.5	28.1	93	33.9	1955	63.6	17.6	54	12.2	1956
7	72.5	22.5	82.2	27.9	93	33.9	1971	62.8	17.1	53	11.7	1968
8	73.7	23.2	83.7	28.7	96	35.6	1971	63.6	17.6	53	11.7	1969
9	74.0	23.3	84.2	29.0	93	33.9	1974	63.8	17.7	51	10.6	1969
10	73.8	23.2	82.7	28.2	92	33.3	1974	63.0	18.3	55	12.8	1953
11	73.4	23.0	82.7	28.2	91	32.8	1959	64.2	17.9	54	12.2	1953
12	73.9	23.3	83.5	28.6	93	33.9	1966	64.3	17.9	55	12.8	1973*
13	74.5	23.6	83.5	28.6	95	35.0	1966*	63.4	18.6	56	13.3	1974
14	75.6	24.2	84.2	29.0	97	36.1	1954	66.9	19.4	58	14.4	1960
15	74.7	23.7	83.3	28.5	92	33.3	1953*	66.0	18.9	57	13.9	1960
16	75.0	23.9	84.5	29.2	97	36.1	1977	63.5	18.6	56	13.3	1960*
17	75.3	24.1	85.1	29.5	97	36.1	1953	63.5	18.6	56	13.3	1946
18	76.7	24.8	86.2	30.1	99	37.2	1953	67.3	19.6	58	14.4	1976*
19	76.9	24.9	86.2	30.1	96	35.6	1977	67.7	19.8	60	15.6	1965
20	75.3	24.1	84.3	29.1	96	35.6	1946	66.2	19.0	53	12.8	1965
21	75.5	24.2	85.4	29.7	102	38.9	1957	63.5	18.6	52	11.1	1966
22	75.1	23.9	84.4	29.1	99	37.2	1955	63.9	18.8	56	13.3	1966
23	75.3	24.1	84.1	28.9	98	36.7	1955*	66.5	19.2	56	13.3	1977
24	74.5	23.6	83.7	28.7	91	32.8	1968*	63.4	18.6	58	14.4	1973
25	74.5	23.6	84.1	28.9	91	32.8	1970*	64.9	18.3	53	11.7	1953
26	74.2	23.4	84.2	29.0	95	35.0	1966	64.2	17.9	51	10.6	1976
27	75.7	24.3	85.1	29.5	96	35.6	1951	66.4	19.1	55	12.8	1977
28	76.1	24.5	85.3	29.6	95	35.0	1954*	66.9	19.4	56	13.3	1977
29	75.2	24.0	84.5	29.2	95	35.0	1954	65.9	18.8	56	13.3	1972*
30	75.2	24.0	84.2	29.0	95	35.0	1954	66.2	19.0	53	11.7	1956
31	76.0	24.4	85.1	29.5	100	37.8	1954	67.0	19.4	59	12.8	1956
Monthly	74.8	23.8	84.3	29.1	102	38.9	1966*	63.3	18.5	51	10.6	1976*

\*ALSO ON EARLIER YEARS

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

# DAILY AVERAGE/EXTREME TEMPERATURES

14793

WILLOW GROVE, PENNSYLVANIA

1945-1962 1965-1977

AUGUST

STATION

STATION NAME

YEARS

MONTH

DAY	MEAN TEMP		AVERAGE				MAXIMUM TEMP				AVERAGE				MINIMUM TEMP							
	AVERAGE		°C		°F		°C		°F		°C		°F		°C		°F					
	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C				
1	75.1	23.9	83.9	28.8	95	35.0	1955	66.3	19.1	60	15.6	1953	66.3	19.1	60	15.6	1953	66.3	19.1	60	15.6	1953
2	73.6	23.1	82.2	27.9	99	37.2	1955	65.0	18.3	54	12.2	1947	65.0	18.3	54	12.2	1947	65.0	18.3	54	12.2	1947
3	74.3	23.5	83.1	28.4	95	35.0	1975*	65.4	18.6	54	12.2	1953	65.4	18.6	54	12.2	1953	65.4	18.6	54	12.2	1953
4	72.9	22.7	81.8	27.7	89	31.7	1955	64.1	17.8	52	11.1	1951	64.1	17.8	52	11.1	1951	64.1	17.8	52	11.1	1951
5	72.4	22.4	80.9	27.2	97	36.1	1955	63.9	17.7	48	8.9	1951	63.9	17.7	48	8.9	1951	63.9	17.7	48	8.9	1951
6	72.3	22.4	81.8	27.7	98	36.7	1955	62.7	17.1	51	10.6	1951	62.7	17.1	51	10.6	1951	62.7	17.1	51	10.6	1951
7	73.2	22.9	82.2	27.9	92	33.3	1955*	64.2	17.9	53	11.7	1957	64.2	17.9	53	11.7	1957	64.2	17.9	53	11.7	1957
8	73.9	23.3	82.8	28.2	92	33.3	1949	65.1	18.4	56	13.3	1950	65.1	18.4	56	13.3	1950	65.1	18.4	56	13.3	1950
9	74.6	23.7	83.1	28.4	95	35.0	1949	66.0	18.9	59	15.0	1955	66.0	18.9	59	15.0	1955	66.0	18.9	59	15.0	1955
10	74.9	23.8	83.8	28.8	97	36.1	1949	65.9	18.8	54	12.2	1972	65.9	18.8	54	12.2	1972	65.9	18.8	54	12.2	1972
11	73.9	23.3	83.2	28.4	97	36.1	1949	64.7	18.2	48	8.9	1972	64.7	18.2	48	8.9	1972	64.7	18.2	48	8.9	1972
12	73.3	22.9	82.6	28.1	90	32.2	1959	64.0	17.8	54	12.2	1968*	64.0	17.8	54	12.2	1968*	64.0	17.8	54	12.2	1968*
13	72.4	22.4	81.3	27.4	92	33.3	1947	63.4	17.4	51	10.6	1957	63.4	17.4	51	10.6	1957	63.4	17.4	51	10.6	1957
14	73.7	23.2	83.0	28.3	92	33.3	1959	64.3	17.9	52	11.1	1957	64.3	17.9	52	11.1	1957	64.3	17.9	52	11.1	1957
15	74.7	23.7	84.4	29.1	93	33.9	1959*	65.0	18.3	57	13.9	1972	65.0	18.3	57	13.9	1972	65.0	18.3	57	13.9	1972
16	74.3	23.5	83.6	28.7	93	33.9	1959*	65.1	18.4	53	11.7	1945	65.1	18.4	53	11.7	1945	65.1	18.4	53	11.7	1945
17	73.4	23.0	82.0	27.8	93	33.9	1959	64.9	18.3	57	13.9	1957	64.9	18.3	57	13.9	1957	64.9	18.3	57	13.9	1957
18	72.5	22.5	81.6	27.6	92	33.3	1956	63.4	17.4	55	12.8	1961*	63.4	17.4	55	12.8	1961*	63.4	17.4	55	12.8	1961*
19	72.2	22.3	81.4	27.4	91	32.8	1966*	63.1	17.3	52	11.1	1953	63.1	17.3	52	11.1	1953	63.1	17.3	52	11.1	1953
20	72.3	22.4	81.7	27.6	94	34.4	1955	62.9	17.2	51	10.6	1949	62.9	17.2	51	10.6	1949	62.9	17.2	51	10.6	1949
21	71.3	21.8	81.2	27.3	94	34.4	1955	61.4	16.3	49	9.4	1977	61.4	16.3	49	9.4	1977	61.4	16.3	49	9.4	1977
22	71.8	22.1	81.5	27.5	91	32.8	1959	62.2	16.8	52	11.1	1970*	62.2	16.8	52	11.1	1970*	62.2	16.8	52	11.1	1970*
23	70.1	21.2	79.4	26.3	88	31.1	1947	60.9	16.1	49	9.4	1952	60.9	16.1	49	9.4	1952	60.9	16.1	49	9.4	1952
24	70.1	21.2	79.7	26.5	91	32.8	1947	60.5	15.8	47	8.3	1952	60.5	15.8	47	8.3	1952	60.5	15.8	47	8.3	1952
25	71.5	21.9	81.5	27.5	94	34.4	1948	61.5	16.4	50	10.0	1946	61.5	16.4	50	10.0	1946	61.5	16.4	50	10.0	1946
26	72.3	22.4	82.5	28.1	98	36.7	1948	62.1	16.7	51	10.6	1977	62.1	16.7	51	10.6	1977	62.1	16.7	51	10.6	1977
27	73.6	23.1	83.6	28.7	98	36.7	1948	63.6	17.6	53	11.7	1968*	63.6	17.6	53	11.7	1968*	63.6	17.6	53	11.7	1968*
28	74.5	23.6	84.5	29.2	98	36.7	1953	64.6	18.1	48	8.9	1968	64.6	18.1	48	8.9	1968	64.6	18.1	48	8.9	1968
29	74.4	23.6	84.5	29.2	98	36.7	1953	64.4	18.0	46	7.8	1965	64.4	18.0	46	7.8	1965	64.4	18.0	46	7.8	1965
30	74.4	23.6	84.3	29.1	99	37.2	1953	64.5	18.1	48	8.9	1965	64.5	18.1	48	8.9	1965	64.5	18.1	48	8.9	1965
31	72.4	22.4	81.4	27.4	100	37.8	1953	63.4	17.4	45	7.2	1965	63.4	17.4	45	7.2	1965	63.4	17.4	45	7.2	1965
Monthly	73.1	22.8	82.4	28.0	100	37.8	1953	63.8	17.7	45	7.2	1965	63.8	17.7	45	7.2	1965	63.8	17.7	45	7.2	1965

\*ALSO ON EARLIER YEARS

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

# DAILY AVERAGE/EXTREME TEMPERATURES

STATION 14793 WILLOW GROVE, PENNSYLVANIA 1945-1962 1965-1977 SEPTEMBER MONTH  
STATION NAME YEARS

DAY	MEAN TEMP		AVERAGE		MAXIMUM TEMP		AVERAGE		MINIMUM TEMP		DATE
	° F	° C	° F	° C	° F	° C	° F	° C	° F	° C	
1	72.2	22.3	81.7	27.6	95	35.0	62.7	17.1	50	10.0	1967
2	71.4	21.9	80.3	26.8	102	38.9	62.5	16.9	49	8.9	1970
3	70.7	21.5	80.3	26.8	98	36.7	61.1	16.2	44	6.7	1967
4	70.8	21.6	80.7	27.1	92	33.3	61.0	16.1	52	11.1	1976
5	71.2	21.8	81.1	27.3	92	33.3	61.3	16.3	49	9.4	1972
6	70.0	21.1	79.3	26.3	89	31.7	60.8	16.0	49	9.4	1949
7	69.0	20.6	78.7	25.9	89	31.7	59.3	15.2	50	10.0	1976*
8	69.3	20.7	78.7	25.9	88	31.1	59.9	15.5	47	8.3	1951
9	68.1	20.1	77.2	25.1	94	34.4	59.1	15.1	45	7.2	1956
10	67.9	19.9	77.3	25.2	89	31.7	58.6	14.8	45	7.2	1956
11	67.0	19.4	76.5	24.7	91	32.8	57.6	14.2	45	7.2	1969
12	66.6	19.2	76.2	24.6	92	33.3	57.0	13.9	44	6.7	1958
13	67.0	19.4	77.2	25.1	95	35.0	56.8	13.8	43	6.1	1967
14	67.5	19.7	76.9	24.9	88	31.1	58.2	14.6	44	6.7	1975*
15	66.4	19.1	76.0	24.4	88	31.1	56.7	13.7	41	5.0	1975
16	66.3	19.1	75.7	24.3	91	32.8	56.9	13.8	44	6.7	1966
17	65.9	18.8	75.3	24.1	87	30.6	56.5	13.6	40	4.4	1959
18	66.0	18.9	75.3	24.2	88	31.1	56.6	13.7	40	4.4	1959
19	66.3	19.1	75.7	24.3	88	31.1	56.9	13.8	39	3.9	1959
20	65.6	18.7	74.2	23.4	86	30.0	56.9	13.8	40	4.4	1956
21	64.7	18.2	72.8	22.7	87	30.6	56.6	13.7	41	5.0	1956
22	63.7	17.6	73.2	22.9	91	32.8	54.2	12.3	43	6.1	1948
23	62.4	16.9	72.0	22.2	91	32.8	52.8	11.6	40	4.4	1967*
24	61.2	16.2	70.6	21.4	91	32.8	51.9	11.1	38	3.3	1974*
25	62.0	16.7	71.3	21.8	91	32.8	52.6	11.4	38	3.3	1950
26	62.1	16.7	72.3	22.4	90	32.2	52.0	11.1	38	3.3	1950
27	61.7	16.5	71.2	21.8	83	28.3	52.1	11.2	34	1.1	1957
28	62.0	16.7	70.8	21.6	84	28.9	53.2	11.8	35	1.7	1957
29	60.6	15.9	70.1	21.2	46	30.0	51.1	10.6	35	1.7	1951
30	59.7	15.4	68.4	20.2	85	29.4	50.9	10.5	37	2.8	1951
31											
Monthly	66.2	19.0	75.6	24.2	102	38.9	56.6	13.8	34	1.1	1957

\*ALSO ON EARLIER YEARS

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

# DAILY AVERAGE/EXTREME TEMPERATURES

5725 DAILY AVERAGE/EXTREME TEMP MAR 1977

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

1945-1962 1965-1977  
YEARS

OCTOBER  
MONTH

DAY	MEAN TEMP		AVERAGE		MAXIMUM TEMP		EXTREME		DATE		AVERAGE		MINIMUM TEMP		EXTREME		DATE	
	°F	°C	°F	°C	°F	°C	°F	°C	°C	°C	°F	°C	°F	°C	°F	°C	°C	°C
1	60.2	15.7	69.2	20.7	83	28.3	83	28.3	1954*	51.1	10.6	37	2.8	1947				
2	60.1	15.6	70.0	21.1	83	28.3	83	28.3	1968*	50.3	10.2	37	2.8	1972				
3	59.7	15.4	69.4	20.8	84	28.9	84	28.9	1954	49.9	9.9	35	1.7	1974				
4	58.1	14.5	68.4	20.2	84	28.9	84	28.9	1959*	47.8	8.8	32	0.0	1945				
5	59.1	15.1	69.4	20.8	89	31.7	89	31.7	1959	48.9	9.4	34	1.1	1965				
6	58.9	14.9	69.0	20.6	88	31.1	88	31.1	1959	48.8	9.3	31	-0.6	1958				
7	58.8	14.9	68.0	20.0	84	28.9	84	28.9	1946	49.6	9.8	34	1.1	1958				
8	58.3	14.6	68.0	20.0	81	27.2	81	27.2	1959	48.5	9.2	32	0.0	1953				
9	59.0	15.0	68.3	20.2	83	28.3	83	28.3	1959*	49.8	9.9	37	2.8	1972				
10	58.2	14.6	67.2	19.6	83	28.3	83	28.3	1958	49.1	9.5	31	-0.6	1972				
11	57.2	14.0	66.4	19.1	84	28.9	84	28.9	1949	48.1	8.9	30	-1.1	1972				
12	57.1	13.9	66.5	19.2	84	28.9	84	28.9	1954	47.7	8.7	33	0.6	1957				
13	56.0	13.3	66.0	18.9	86	30.0	86	30.0	1954	46.0	7.8	36	2.2	1957				
14	56.7	13.7	66.4	19.1	83	28.3	83	28.3	1975	47.0	8.3	33	0.6	1972				
15	58.3	14.6	68.3	20.2	82	27.8	82	27.8	1975*	48.4	9.1	38	3.3	1972*				
16	56.6	13.7	66.9	19.4	82	27.8	82	27.8	1958	46.3	7.9	37	2.8	1972*				
17	55.6	13.1	65.2	18.4	79	26.1	79	26.1	1958*	46.0	7.8	31	-0.6	1970				
18	55.0	12.8	64.7	18.2	79	26.1	79	26.1	1953	45.3	7.4	32	0.0	1977				
19	52.8	11.6	61.6	16.4	79	26.1	79	26.1	1945	44.0	6.7	26	-3.3	1976				
20	52.8	11.6	62.2	16.8	79	26.1	79	26.1	1969	43.5	6.4	29	-1.7	1972*				
21	51.9	11.1	61.8	16.6	84	28.9	84	28.9	1947	42.4	5.8	25	-3.9	1952				
22	53.3	11.8	62.6	17.0	77	25.0	77	25.0	1975	44.1	6.7	32	0.0	1974				
23	55.0	12.8	64.4	18.0	84	28.9	84	28.9	1947	45.6	7.6	29	-1.7	1969				
24	54.8	12.7	63.4	17.4	73	22.8	73	22.8	1973*	46.1	7.8	25	-3.9	1969				
25	52.0	11.1	60.1	15.6	73	22.8	73	22.8	1954	43.8	6.6	33	0.6	1969*				
26	51.1	10.6	60.1	15.6	75	23.9	75	23.9	1947	42.1	5.6	28	-2.2	1952				
27	51.4	10.8	60.2	15.7	74	23.3	74	23.3	1947	42.6	5.9	28	-2.2	1976				
28	51.0	10.6	59.9	15.5	76	24.4	76	24.4	1947	42.0	5.6	26	-3.3	1976				
29	52.5	11.4	62.0	16.7	81	27.2	81	27.2	1971	42.9	6.1	27	-2.8	1965				
30	51.0	10.6	60.2	15.7	80	26.7	80	26.7	1946	41.7	5.4	28	-2.2	1967				
31	52.6	11.4	62.4	16.9	80	26.7	80	26.7	1946	42.8	6.0	26	-3.3	1966				
Monthly	55.7	13.2	65.2	18.4	89	31.7	89	31.7	1959	46.3	7.9	25	-3.9	1969*				

\*ALSO ON EARLIER YEARS

DIRNAVOCEANMET-SMOS

## DAILY AVERAGE/EXTREME TEMPERATURES

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

14793

WILLOW GROVE, PENNSYLVANIA

1945-1962 1963-1977

MONTH

YEARS

STATION NAME

STATION

DAY	MEAN TEMP			MAXIMUM TEMP			MINIMUM TEMP		
	AVERAGE °F	AVERAGE °C	DATE	AVERAGE °F	AVERAGE °C	DATE	AVERAGE °F	AVERAGE °C	DATE
1	52.3	11.3	1950	60.5	15.8	1950	28	6.7	1954
2	60.8	16.0	1950	61.5	16.4	1950	28	15.6	1976
3	52.2	11.2	1975	59.5	15.3	1975	25	7.2	1951
4	51.4	10.8	1974	58.2	14.6	1974	23	7.1	1951
5	48.4	9.1	1961	55.6	13.1	1961	24	5.1	1951
6	46.2	7.9	1948	54.7	12.6	1948	24	3.2	1967
7	46.6	8.1	1975	54.9	12.7	1975	28	3.4	1954
8	47.1	8.4	1975	55.2	12.9	1975	24	3.9	1967
9	46.0	7.8	1975	54.0	12.2	1975	19	3.4	1976
10	45.5	7.5	1975	53.0	11.7	1975	27	3.2	1956
11	43.9	6.6	1949	52.0	11.1	1949	23	2.1	1956
12	46.8	8.2	1967*	55.1	12.8	1967*	26	3.5	1957
13	45.3	7.4	1955	53.1	11.7	1955	25	3.1	1954*
14	46.5	8.1	1955	54.9	12.7	1955	24	3.4	1977
15	44.8	7.1	1973	52.1	11.2	1973	21	3.0	1967
16	45.4	7.4	1956	54.4	12.4	1956	19	2.7	1967
17	44.4	6.9	1953	52.7	11.5	1953	22	2.3	1970
18	44.3	6.8	1953	52.1	11.2	1953	18	2.5	1959
19	44.1	6.7	1957	52.5	11.4	1957	22	2.1	1951
20	42.4	5.8	1953*	50.0	10.0	1953*	21	1.6	1951
21	41.8	5.4	1956	49.5	9.7	1956	18	1.1	1951
22	40.6	4.8	1953	47.8	8.8	1953	18	1.0	1969
23	39.7	4.3	1953	48.3	9.1	1953	20	-0.5	1970
24	41.5	5.3	1958	49.9	9.9	1958	17	0.6	1970*
25	40.3	4.6	1973	48.1	8.9	1973	19	0.2	1970
26	40.3	4.6	1946	48.5	9.2	1946	19	0.1	1950
27	40.2	4.6	1960*	47.9	8.8	1960*	21	0.3	1976
28	41.0	5.0	1973	49.2	9.6	1973	16	0.4	1955
29	37.1	2.8	1968	44.2	6.8	1968	13	-1.1	1955
30	35.2	1.8	1975*	41.4	5.2	1975*	13	-1.8	1976
31									
Monthly	44.7	7.1	1950	52.4	11.3	1950	13	2.8	1976*

\*ALSO ON EARLIER YEARS

DIRNAVOCEANMET-SMOS

NAVAL WEATHER SERVICE DETACHMENT  
ASHEVILLE, NORTH CAROLINA

# DAILY AVERAGE/EXTREME TEMPERATURES

5725 DAILY AVERAGE/EXTREME TEMP MAR 1978

14793 WILLOW GROVE, PENNSYLVANIA 1945-1962 1965-1977 DECEMBER

STATION MONTH

YEARS

STATION NAME

F.Y.	MEAN TEMP		MAXIMUM TEMP				MINIMUM TEMP				DATE
	AVERAGE °F	AVERAGE °C	AVERAGE °F	AVERAGE °C	EXTREME °F	EXTREME °C	AVERAGE °F	AVERAGE °C	EXTREME °F	EXTREME °C	
1	35.3	1.8	42.1	5.6	62	16.7	28.5	-1.9	12	-11.1	1976
2	35.4	1.9	42.9	6.1	63	17.2	27.9	-2.3	6	-14.4	1946
3	37.4	3.0	45.5	7.5	65	18.3	29.4	-1.4	9	-12.8	1976
4	38.3	3.5	46.6	8.1	67	19.4	29.9	-1.2	10	-12.2	1966
5	39.1	3.9	46.9	8.3	62	16.7	31.3	-0.4	18	-7.8	1966
6	39.1	3.9	47.4	8.6	66	18.9	30.7	-0.7	17	-8.3	1954
7	39.2	4.0	47.0	8.3	70	21.1	31.3	-0.4	15	-9.4	1954
8	37.7	3.2	45.1	7.3	65	18.3	30.4	-0.9	14	-10.0	1970
9	37.4	3.0	44.4	6.9	69	20.6	30.3	-0.9	13	-10.6	1976*
10	37.4	3.0	44.2	6.8	70	21.1	30.6	-0.8	10	-12.2	1968
11	34.5	1.4	42.1	5.6	63	17.2	27.6	-2.4	9	-12.8	1968*
12	34.9	1.6	41.3	5.2	58	14.4	26.6	-1.9	9	-12.8	1977
13	36.2	2.3	43.5	6.4	61	16.1	26.9	-1.7	7	-13.9	1960
14	34.5	1.4	40.8	4.9	55	12.8	26.3	-2.1	10	-12.2	1976
15	33.4	0.8	40.1	4.5	65	18.3	26.7	-2.9	14	-10.0	1958
16	32.2	0.1	38.7	3.7	64	17.8	25.8	-3.4	9	-12.8	1951
17	32.1	0.1	38.9	3.8	54	12.2	25.3	-3.7	-1	-18.3	1951
18	31.9	-0.1	38.9	3.8	56	13.3	25.0	-3.9	-1	-18.3	1951
19	31.9	-0.1	38.8	3.8	61	16.1	25.0	-3.9	10	-12.2	1951
20	33.1	0.6	40.3	4.6	62	16.7	25.9	-3.4	8	-13.3	1955
21	33.2	0.7	40.5	4.7	59	15.0	25.9	-3.4	5	-15.0	1955
22	31.8	-0.1	37.5	3.1	60	15.6	26.1	-3.3	9	-12.8	1958
23	32.2	0.1	39.7	4.3	62	16.7	24.7	-4.1	5	-15.0	1960
24	31.9	-0.1	38.0	3.3	54	12.2	25.9	-3.4	7	-13.9	1960
25	31.7	-0.2	38.5	3.6	59	15.0	25.0	-3.9	12	-11.1	1969*
26	32.0	0.0	39.3	4.1	60	15.6	24.6	-4.1	10	-12.2	1948
27	30.4	-0.9	37.2	2.9	63	17.2	23.7	-4.6	3	-16.1	1950
28	32.3	0.2	40.5	4.7	60	15.6	24.2	-4.3	6	-14.4	1960
29	32.1	0.1	39.5	4.2	60	15.6	24.8	-4.0	11	-11.7	1977
30	33.5	0.8	40.1	4.5	54	12.2	26.9	-2.8	6	-14.4	1976
31	32.5	0.3	39.6	4.2	64	17.8	25.5	-3.6	11	-11.7	1976
Monthly	34.4	1.3	41.5	5.3	70	21.1	27.3	-2.6	-1	-18.3	1951

\*ALSO ON EARLIER YEARS

DIRNAVOCEANMET-SMOS

# EXTREME VALUES

MAXIMUM TEMPERATURE  
(FROM DAILY OBSERVATIONS)

STATION WILLOW GROVE, PENNSYLVANIA YEARS 45-62, 65-77

WHOLE DEGREES FAHRENHEIT

MONTH YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ALL MONTHS
45				83	83	91	96	93	88	84	71		
46		64	78					87					
47		52		80	86	90		93	87				
48		63	81	76	88		95	98	88		76		
49		73		81		95		97	85	84	72		
50		50	70	78	81	93	91	90	86	83	83	65	
51	63	64	62	63	90	90	96	93	89		69		
52	61	52	67	81	85	99	98	90	95	79	71	63	99
53	60	69	68	82	89	94	99	100	102	79	72	66	102
54	60	71	70	82	85	91	100	90	89	86	62	59	100
55	54	63	70	82	89	89	99		86	82	72	56	
56	50	61	64	83	91	96	95	93	88	82	72	70	96
57	60	61	76	90	87	99	102	95	91	76	70	62	102
58	56	52	54	80	85	88	94	91	90	83	67	54	94
59	64	53	74	83	92	97	94	93	94	89	73	58	97
60	55	62	72	89	82	90	91	92	87	81	67	65	92
61	55	66	74	82	84	95	95	90	92	80	77	56	95
62	59	57											
63		60	57	79	89	93	90	91	89	75	68	64	
66	56	53	66	77	83	95	102	92	90	76	68	69	102
67	68	57	69	82	78	92	88	86	82	84	66	60	92
68	47	49	78	80	80	93	93	93	88	83		58	
69	48	43	67	84	92	93	92	89	69	79	68	60	93
70	48	57	69	82	89	90		90	91	81	64	63	
71	46	61	64	74	86	91	96	91	90	81	77	64	96
72	62	60	73	83	83	86	92	90	87	70	66	64	92
73	65	56	72	82	81	91	92	95	92	79	76	67	95
74	67	67	76	85	87	92	93	88	84	78	80	59	93
75	67	56	63	71	85	92	88	95	80	83	76	65	93
76	62	68	75	93	83	92	88	90	88	74	61	55	93
MEAN													
S. D.													
TOTAL OBS.													

**MAXIMUM TEMPERATURE**  
(FROM DAILY OBSERVATIONS)

14793	WILLOW GROVE, PENNSYLVANIA	45-62, 63-77
STATION	STATION NAME	YEARS

WHOLE DEGREES FAHRENHEIT

[illegible]

NAVWEASERVCOM

MAXIMUM TEMPERATURE  
(FROM DAILY OBSERVATIONS)

14793	WILLOW GROVE, PENNSYLVANIA	45-62, 65-77
STATION	STATION NAME	

YEARS

WHOLE DEGREES FAHRENHEIT  
/BASED ON LESS THAN FULL MONTHS/

[illegible]

NAVWEASERVCOM

# EXTREME VALUES

## MINIMUM TEMPERATURE (FROM DAILY OBSERVATIONS)

14793 WILLOW GROVE, PENNSYLVANIA 45-62, 65-77

STATION NAME

STATION

YEARS

WHOLE DEGREES FAHRENHEIT

5723 Extreme Values Jan 1969

MONTH YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ALL MONTHS
45				30	36	45	55	53	46	42	21		
46		10	25	33	29	50		50	39				
47		3	10	32	40		57	57	43		30		
48		11	8	31	37	50		51	43	33	20		
49		6	23	22	38	44	57	51	38	29	19	3	
50		7	19	32	40	50	55	48	35		17		
51	12	14	15	30	42	47	53	52	40	25			
52	5	16	18	29	33	46	53	52	44		25	11	
53	19	14	15	30	39	49	56	54	44		25	13	
54	1	8	19	22	38	49	57		44	33	13	5	
55	5	13	18	29	33	45	53	48	34	32	25	12	1
56	10	16	20	27	39	42	56	53	40	31	16	9	0
57	9	6	20	32	39	49	56	56	39	28	18	8	6
58	20	18	10	30	39	49	55	52	48	33	25	5	5
59	4	4	16	29	40	49	57	53	40	33	24	11	4
60	8	1	12	22	41	46	54	49	40	27	23	14	
61		6	21	30	33	44	52	54	44	26	23	10	5
62		1	6	30	39	48	55	57	40	28	19	13	1
63		1	15	29	35	49	53	48	47	29		9	
64		4	17	24	37	45	51	54	42	25	18	12	9
65		8	17	29	35	48	52	52	42	30	17	14	
66		3	22	30	39	52	56	53	43	41	20	17	3
67		7	16	23	37	39	55	48	42	27	21	18	3
68		4	24	30	37	53	55	53	47	37	24	18	4
69	12	12	23	31	36	52	56	55	38	28	21	25	12
70	12	13	17	25	42	51	55	57	41	30	28	15	12
71	4	9	19	27	37	47	51	47	41	26	13	6	4
72													
73													
74													
75													
76													
MEAN													
S. D.													
TOTAL OBS.													

NAVWEASERVCOM

MINIMUM TEMPERATURE  
(FROM DAILY OBSERVATIONS)

STATION	STATION NAME	YEARS
6793	WILLOW GROVE, PENNSYLVANIA	45-62, 65-77

WHOLE DEGREES FAHRENHEIT

[illegible]

NAVWEASERVCOM

# EXTREME VALUES

## MINIMUM TEMPERATURE (FROM DAILY OBSERVATIONS)

14793 STATION WILLOW GROVE, PENNSYLVANIA 45-62, 65-77 YEARS

WHOLE DEGREES FAHRENHEIT  
/BASED ON LESS THAN FULL MONTHS/

MONTH YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ALL MONTHS
45		10 27	24 30			43 29				32 19		10 21	MIN TEMP DAYS
46	7 29			29 28	41 30		56 26		49 29		26 29	6 30	MIN TEMP DAYS
47	9 30		17 30				58 30			37 30	22 29		MIN TEMP DAYS
48	3- 30					48 29				30 30	29	9	MIN TEMP DAYS
49	17 30		14 30		41 30		58 30			30		29 17	MIN TEMP DAYS
50	16 30											30	MIN TEMP DAYS
51										36 30		1- 30	MIN TEMP DAYS
52											20 23	12 30	MIN TEMP DAYS
53										32 30			MIN TEMP DAYS
54										32 30			MIN TEMP DAYS
55								55 29					MIN TEMP DAYS
56					34 30								MIN TEMP DAYS
62			10 28										MIN TEMP DAYS
65	0 30												MIN TEMP DAYS
68											25 29		MIN TEMP DAYS
MEAN													
S. D.													
TOTAL OBS.													

NAVWEASERVCOM

5723 Extreme Values Jan 1969



# PSYCHROMETRIC SUMMARY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

JAN

MONTH

STATION

STATION NAME

73-77

YEARS

JAN

MONTH

PAGE 1

HOURS (L.S.T.)

05 PSYCHROMETRIC SUMMARY JAN 68

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																	TOTAL D.B./W.B.	TOTAL								
	0	1 - 2	3 - 4	5 - 6	7 - 8	9 - 10	11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 - 24	25 - 26	27 - 28	29 - 30	≥ 31		Dry Bulb	Wet Bulb	Dew Point						
68/ 67							.1											1	1								
66/ 65			.2				.1											3	3								
64/ 63			.1					.1										3	3								
62/ 61	.2	.1		.2					.1									6	6	5							
60/ 59		.2	.1	.2			.1	.1										5	5	1							
58/ 57	.2	.3	.1	.2	.2	.1	.2	.1										12	12	3							
56/ 55	.1	.2	.2	.2	.1	.3	.1											15	15	13							
54/ 53	.1	.1	.1	.2	.2	.1												8	8	6							
52/ 51	.1	.4		.1	.2	.1		.1										12	12	7							
50/ 49	.1	.2	.4	.6	.2	.1	.2											22	22	11							
48/ 47		.4	.3	.6	.6	.2												28	28	10							
46/ 45	.1	.5	.8	.7	.5		.2											34	34	26							
44/ 43	.4	.6	1.0	.7	.4	.1												39	40	23							
42/ 41	.3	1.0	.9	2.4	.7	.1												68	68	43							
40/ 39	.2	1.3	2.2	1.4	.3	.1												67	67	46							
38/ 37	.2	2.5	2.3	1.5	.2													83	83	53							
36/ 35	.2	2.0	2.1	1.5	.4													78	78	100							
34/ 33		2.4	2.5	2.1	.2													90	90	89							
32/ 31	.1	1.7	2.8	1.3	.2													76	76	74							
30/ 29	.2	1.9	2.7	1.7														79	79	78							
28/ 27	.4	2.1	2.6	.7	.1													73	73	88							
26/ 25	.4	1.8	3.3	.8														78	78	78							
24/ 23	.4	2.1	2.5	.5														68	68	92							
22/ 21	.2	1.4	2.3	.3														52	52	73							
20/ 19	.3	2.5	1.7															56	56	65							
18/ 17	.2	2.3	1.4	.1														49	49	58							
16/ 15	.2	2.2	1.0															42	42	58							
14/ 13		1.5	.5															24	24	44							
12/ 11		1.2	.2															17	17	26							
10/ 9	.1	.2	.3															16	16	22							
8/ 7		.6	.1															8	8	10							
6/ 5		.8																10	10	13							
4/ 3	.1	.4																6	6	12							
2/ 1		.1																1	1	2							
Element (X)	ΣX																	ΣX	X̄	σ <sub>x</sub>	Mean No. of Hours with Temperature				Total		
Rel. Hum.																					≤ 0 F	≥ 32 F	≥ 67 F	≥ 73 F	≥ 80 F	≥ 93 F	Total
Dry Bulb																											
Wet Bulb																											
Dew Point																											

# PSYCHROMETRIC SUMMARY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77  
YEARS

JAN  
MONTH

PAGE 2  
HOURS (L.S.T.)

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PSYCHROMETRIC SUMMARY

JAN 68

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																	TOTAL		TOTAL	
	0	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	≥31	D.B./W.B.	Dry Bulb	Wet Bulb	Dew Point
0/-	1	.3	.2															6	6	4	20
-2/-	3	.1	.1															2	2	4	23
-4/-	5	.1																1	1	1	11
-6/-	7	.1																1	1	1	9
-8/-	9																				10
-10/-	11																				6
-12/-	13																				7
-14/-	15																				4
-16/-	17																				2
-18/-	19																				1
TOTAL		5.235	634.6	17.8	4.6	1.2	.6	.3										1239	1240	1239	1239

Element (X)	$\Sigma X^2$	$\Sigma X$	$\bar{X}$	$\sigma_x$	No. Obs.	Mean No. of Hours with Temperature					Total
Rel. Hum.	5642331	81093	65.5	16.444	1239	≤ 0 F	≤ 32 F	≥ 67 F	≥ 73 F	≥ 93 F	Total
Dry Bulb	1381101	38631	31.2	11.972	1240	6.0	399.0	.6			744.0
Wet Bulb	1115306	34496	27.8	11.184	1239	6.0	482.2				744.0
Dew Point	745474	25046	20.2	13.099	1239	55.8	614.9				744.0

# PSYCHROMETRIC SUMMARY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77

YEARS

FEB  
MONTH

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HOURS (L.S.T.)

05 PSYCHROMETRIC SUMMARY JAN 68

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																	TOTAL D.B./W.B.	TOTAL									
	0	1 - 2	3 - 4	5 - 6	7 - 8	9 - 10	11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 - 24	25 - 26	27 - 28	29 - 30	≥ 31		Dry Bulb	Wet Bulb	Dew Point							
68/ 67						.1			.2	.1								4	4									
66/ 65						.1			.1	.1								4	4									
64/ 63						.1		.2	.1	.1								6	6									
62/ 61			.2			.1		.1	.1	.1								5	5									
60/ 59		.1	.2			.3			.1	.1								8	8									
58/ 57		.1	.2			.3			.1	.1								11	11	7								
56/ 55	.1	.2	.3	.2	.2	.2	.6											17	17	4								
54/ 53	.2	.4	.1	.4	.2	.4	.1											20	20	9								
52/ 51		.5	.5	.5	.2	.2	.3											21	21	13								
50/ 49	.2	.1	.5	.2	.8	.6	.2											29	29	22								
48/ 47	.1	.4	.1	.4	.6	.4	.1											25	25	21								
46/ 45	.3	.6	.7	.6	1.0	.3												39	39	23								
44/ 43	.2	1.2	.8	1.1	1.6	.4	.1											61	61	27								
42/ 41	.2	.5	.9	.8	.6	.4												39	39	44								
40/ 39	.4	.3	1.5	2.0	.8	.2												58	58	42								
38/ 37	1.2	1.1	1.3	2.2	1.1	.3												80	80	67								
36/ 35	.8	1.7	2.0	1.5	1.0	.1												80	80	63								
34/ 33	.6	2.7	2.1	2.1	.6	.1												93	93	65								
32/ 31	1.7	1.6	2.1	1.8	.3													84	84	111								
30/ 29	.6	1.3	1.5	2.1	.1													64	64	88								
28/ 27	.4	1.4	3.6	1.5														78	78	68								
26/ 25	.4	1.7	2.7	.9	.1													65	65	71								
24/ 23	.2	1.6	3.1	.3														58	58	88								
22/ 21		1.4	2.0															38	39	73								
20/ 19		2.0	.8															32	32	48								
18/ 17	.1	2.6	.9															40	40	49								
16/ 15	.2	1.6	.2															22	22	36								
14/ 13		.7	.6															15	15	20								
12/ 11	.2	.9																12	12	20								
10/ 9		.6	.1															8	8	13								
8/ 7		.7																8	8	6								
6/ 5		.2																2	2	7								
4/ 3		.1																1	1	2								
2/ 1																												
Element (X)	$\Sigma X^2$																	$\Sigma X$	$\bar{X}$	$\sigma_x$	Mean No. of Hours with Temperature					TOTAL		
Rel. Hum.																					≤ 0 F	≥ 32 F	≥ 67 F	≥ 73 F	≥ 80 F	≥ 93 F	Total	
Dry Bulb																												
Wet Bulb																												
Dew Point																												

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## PSYCHROMETRIC SUMMARY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

**FEB**  
**MONTH**

**FEB**  
**MONTH**

**PAGE 2**  
**HOURS (L-S)**

GE 2  
HOURS (L.S.T.)

[illegible]

# PSYCHROMETRIC SUMMARY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

MAR

MONTH

PAGE 1

HOURS (L.S.T.)

05 PSYCHROMETRIC SUMMARY JAN 68

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																		TOTAL		TOTAL	
	0	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	≥31	D.B./W.B.	Dry Bulb	Wet Bulb	Dew Point	
80/ 79						.1			.1									1	1			
78/ 77						.1												1	1			
76/ 75						.2			.1									1	1			
74/ 73						.2			.1		.1							4	4			
72/ 71				.1		.2			.1		.1							5	5			
70/ 69						.2			.1		.1							4	4			
68/ 67			.1	.1	.2	.2	.2	.1	.1	.1								11	11	1		
66/ 65		.1	.1	.1	.1	.1	.1	.1	.2	.1								11	11	2		
64/ 63		.1	.1	.1	.2	.1	.2	.1	.1	.1								11	11	5		
62/ 61		.2	.1	.3	.2	.2	.3	.1	.1	.1	.1							21	21	6	5	
60/ 59		.4	.1	.2	.4	.7	.1	.2	.1									27	27	12	3	
58/ 57	.1	.2	.5	.1	.3	.3	.4	.3										28	28	16	11	
56/ 55	.2	.2	.2	.3	.2	.6	.4	.1										26	26	19	10	
54/ 53	.4	.8	.5	.5	.7	.6	.2	.5										52	52	25	15	
52/ 51	.4	.8	.1	.3	1.0	.3	.6	.3										48	48	33	24	
50/ 49	.5	.8	.4	.7	1.0	.7	.3	.6										62	62	50	31	
48/ 47	1.1	1.2	1.6	1.2	.9	.6	.6											91	91	42	34	
46/ 45	1.0	1.1	.9	1.0	1.3	1.2	.6											88	88	71	35	
44/ 43	.6	1.1	1.6	1.3	1.5	.7	.4											90	90	72	41	
42/ 41	2.3	1.5	1.3	1.5	1.3	1.1	.1											114	114	103	62	
40/ 39	.7	1.4	1.9	1.7	1.9	.6												100	100	85	53	
38/ 37	2.3	1.6	1.1	2.3	1.4	.5												114	114	115	79	
36/ 35	.7	1.5	2.6	1.1	.8	.4												89	89	114	68	
34/ 33	.5	1.4	1.7	1.4	.6													68	68	109	70	
32/ 31	.6	1.4	.9	1.6	.5													62	62	108	71	
30/ 29	.2	.6	1.0	1.1	.1													39	39	81	66	
28/ 27	.8	.7	.7	.6														27	27	52	67	
26/ 25	.2	.2	1.1	.5														25	25	49	83	
24/ 23		.2	.8															12	12	32	55	
22/ 21		.2	.2															5	5	22	55	
20/ 19			.1															1	1	11	55	
18/ 17		.1	.1															2	2	2	48	
16/ 15																				3	37	
14/ 13																					39	
Element (X)	ΣX											ΣX <sup>2</sup>		Mean No. of Hours with Temperature				Total				
Rel. Hum.														≤ 0 F    ≤ 32 F    ≥ 67 F    ≥ 73 F    ≥ 80 F    ≥ 93 F								
Dry Bulb																						
Wet Bulb																						
Dew Point																						

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## PSYCHROMETRIC SUMMARY

**STATION**  
**14793**

**WILLOW GROVE, PENNSYLVANIA**  
**STATION NAME**

73-77

YEARS

MAR  
MONTHMAR  
MONTH

**PAGE 2**  
HOURS (L.S.)

GE 2  
HOURS (L.S.T.)

[illegible]

# PSYCHROMETRIC SUMMARY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

APR

PAGE 1

05 PSYCHROMETRIC SUMMARY JAN 68

STATION

STATION NAME

YEARS

MONTH

HOURS (L.S.T.)

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																	TOTAL		TOTAL	
	0	1 - 2	3 - 4	5 - 6	7 - 8	9 - 10	11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 - 24	25 - 26	27 - 28	29 - 30	≥ 31	D.B./W.B.	Dry Bulb	Wet Bulb	Dew Point
92/ 91													.1	.1				2	2		
90/ 89												.1	.2					1	1		
88/ 87											.1	.1	.1					4	4		
86/ 85											.1	.1	.1					3	3		
84/ 83							.1	.1	.2	.2	.2	.1	.1	.1				5	5		
82/ 81							.1	.1	.2	.2	.2	.2	.2					10	10		
80/ 79					.1		.2	.2	.4	.2	.1	.1	.1					10	10		
78/ 77							.3	.2	.1	.2	.1	.1	.3					7	7		
76/ 75				.1			.4	.2	.2	.1	.1	.1						16	16		
74/ 73					.2		.2	.2	.5	.1	.1	.1	.3					20	20		
72/ 71				.1	.1		.7	.5	.3	.1	.1	.2	.1					26	26		2
70/ 69					.3		.3	.2	.2	.3	.2	.2	.1					21	21		2
68/ 67			.2	.2	.7	.2	.4	.2	.5	.2	.2	.2						34	34		12
66/ 65			.5	.2	.6	.2	.2	.3	.2	.4								29	29		16
64/ 63	.1	.2	.7	.6	.3	.6	.2	.5	.4	.1								44	44		30
62/ 61	.2	.1	.4	.4	.5	.7	.3	.7	.3	.2								47	47		36
60/ 59	.1	.7	.7	.4	.5	.3	.6	.8	.2									52	52		42
58/ 57	.1	1.0	.3	.5	.4	.2	.4	1.1	.2									52	52		44
56/ 55	.4	.8	.6	.6	.7	1.3	1.1	.6	.1									75	75		43
54/ 53	.6	.2	.4	.9	.9	1.1	.7	.2										60	60		51
52/ 51	.3	1.0	.8	.9	1.2	1.3	.6	.5										80	80		57
50/ 49	.8	1.6	1.2	.5	1.7	.9	.7											88	88		62
48/ 47	.8	1.2	1.4	1.7	1.3	.9	.8	.1										101	101		92
46/ 45	.5	.8	1.7	1.2	1.9	1.1	.2	.1										89	89		103
44/ 43	.2	1.2	1.5	1.4	1.3	.2	.2	.1										73	73		95
42/ 41	.7	1.0	1.1	1.2	1.2	.6	.1											69	69		110
40/ 39	.4	.9	1.0	.7	.3	.1												42	42		94
38/ 37	.1	.6	.7	1.2	.7	.3												43	43		85
36/ 35	.1	.4	.8	1.0	.4	.1												34	34		64
34/ 33		.2	1.0	.6	.2													23	23		39
32/ 31	.1		1.5	.2	.1													23	23		36
30/ 29			.4	.2														8	8		45
28/ 27		.2	.1	.2														5	5		19
26/ 25		.1	.2															4	4		12
Element (X)	ΣX											ΣX <sup>2</sup>		Mean No. of Hours with Temperature					Total		
Rel. Hum.														± 0 F					± 80 F		
Dry Bulb														± 32 F					± 93 F		
Wet Bulb														± 67 F							
Dew Point														± 73 F							

# PSYCHROMETRIC SUMMARY

5105

PSYCHROMETRIC SUMMARY

JAN 68

14793

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

APR

MONTH

PAGE 2

HOURS (L.S.T.)

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																	TOTAL		TOTAL		Dew Point
	0	1 - 2	3 - 4	5 - 6	7 - 8	9 - 10	11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 - 24	25 - 26	27 - 28	29 - 30	≥ 31	D.B./W.B.	Dry Bulb	Wet Bulb		
24/ 23																				7	54	
22/ 21																				2	41	
20/ 19																					46	
18/ 17																					28	
16/ 15																					12	
14/ 13																					14	
12/ 11																					12	
10/ 9																					3	
8/ 7																					8	
6/ 5																					2	
2/ 1																					2	
0/- 1																					2	
TOTAL	5.6	12.2	17.2	15.2	15.7	11.9	7.6	6.2	3.6	2.2	1.1	1.2	.2	.1				1200	1200	1200	1200	
							</															

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# PSYCHROMETRIC SUMMARY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

MAY

MONTH

PAGE 1

HOURS (L.S.T.)

5 PSYCHROMETRIC SUMMARY JAN 68

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																TOTAL		TOTAL			
	0	1 - 2	3 - 4	5 - 6	7 - 8	9 - 10	11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 - 24	25 - 26	27 - 28	29 - 30	≥ 31	D.B./W.B.	Dry Bulb	Wet Bulb	Dew Point	
88/ 87									.2		.1	.1						4	4			
86/ 85									.1		.2	.2						4	4			
84/ 83							.3	.2	.2	.2	.1	.1						12	12			
82/ 81							.3	.2	.2	.2	.2	.2						11	11			
80/ 79				.1	.2	.2	.6	.4	.2	.1	.2							25	25			
78/ 77				.3	.6	.4	.5	.1	.6	.2				.1				34	34			
76/ 75		.1		.3	.6	.6	.2	.6	.1	.3								33	33	7	2	
74/ 73		.1	.1	.9	.8	.8	.6	.6	.2	.2	.1	.1						55	55	17	2	
72/ 71		.3	.7	.6	1.0	.6	.8	.7	.2	.2								65	65	31	9	
70/ 69	.2	.2	.8	1.3	.6	.3	.5	1.0	.4		.2							69	69			
68/ 67	.2	.4	1.9	1.0	.6	1.0	.8	.2	.1	.2								79	79	53	23	
66/ 65	.3	1.3	1.5	1.0	.7	.7	1.4	.6	.2			.1						96	96	70	25	
64/ 63	.2	1.1	.7	1.0	.8	1.0	.4	.6	.2									74	74	86	62	
62/ 61	.5	1.5	.7	.8	1.0	1.0	.4	.3	.2									80	80	88	85	
60/ 59	.3	1.7	1.0	.6	1.4	.8	.2	.1	.1									77	77	87	71	
58/ 57	1.0	1.8	1.7	1.4	.6	.4	.2	.2	.1									92	92	96	75	
56/ 55	.6	1.9	1.6	.8	1.0	.4	.4	.4										88	88	93	70	
54/ 53	1.1	1.0	1.7	.9	.7	.6	.5	.1										81	81	131	77	
52/ 51	.8	2.1	1.9	.8	.5	.6	.2											85	85	99	82	
50/ 49	.2	1.6	.9	.6	.2	.2	.1											48	48	98	102	
48/ 47	.3	1.0	.9	.7	.6	.2												47	47	70	99	
46/ 45	.2	.3	1.0	.3	.2	.1												26	26	64	77	
44/ 43	.8	.4	.6	.3	.2	.1												31	31	49	88	
42/ 41	.1	.4	.2	.4														14	14	44	60	
40/ 39		.2		.1	.1													5	5	30	46	
38/ 37		.1	.2	.1														5	5	15	42	
36/ 35																				9	29	
34/ 33																				2	20	
32/ 31																				1	23	
30/ 29																					13	
28/ 27																					21	
26/ 25																					18	
24/ 23																					6	
22/ 21																					7	
Element (X)	Σ X <sup>2</sup>				Σ X				X̄				σ <sub>x</sub>				Mean No. of Hours with Temperature				Total	
Rel. Hum.																	≤ 0 F				≥ 93 F	
Dry Bulb																	≤ 32 F				≥ 80 F	
Wet Bulb																	≤ 67 F				≥ 73 F	
Dew Point																						

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# PSYCHROMETRIC SUMMARY

14793 STATION NAME: WILLOW GROVE, PENNSYLVANIA  
 73-77 YEARS  
 1968 PSYCHROMETRIC SUMMARY JAN 68  
 14793 STATION NAME: WILLOW GROVE, PENNSYLVANIA  
 73-77 YEARS  
 1968 PSYCHROMETRIC SUMMARY JAN 68

PAGE 1  
 HOURS (L.S.T.)

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																	TOTAL		TOTAL	
	0	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	≥31	D.B./W.B.	Wet Bulb	Dew Point	
92/ 91										.2	.1							3	3		
90/ 89									.1	.2	.1							8	8		
88/ 87								.2	.3	.4								16	16		
86/ 85								.4	.7	.3								23	23		
84/ 83								.3	.8	.5	.2							40	40		
82/ 81								.2	.9	.3	.1							44	44		
80/ 79				.6	.7	1.7	.7	.6	.8	.5								68	68	2	
78/ 77				.7	3.1	.7	1.1	.7	.5	.3	.2							88	88	3	
76/ 75				.7	2.1	1.1	.7	.8	.7	.2	.1							93	93	3	
74/ 73				.2	1.4	2.3	1.2	1.0	.9	.4								102	102	43	
72/ 71		.2	1.2	2.4	2.1	1.0	.7	.8	.3	.2								107	107	87	
70/ 69		.7	2.2	2.8	1.6	.9	.8	.7	.1	.2	.1							120	120	160	
68/ 67		.5	1.8	1.8	.6	.8	.5	.3	.2	.1								80	80	147	
66/ 65		.4	1.2	1.9	1.2	.8	.2	.2	.2	.1								76	76	125	
64/ 63		.8	2.6	1.4	1.5	.5	.6	.1										90	90	113	
62/ 61		.2	1.8	1.0	1.4	.7	.3											66	66	122	
60/ 59		.1	3.0	1.8	1.0	.8	.1	.1										83	83	104	
58/ 57		.2	1.1	1.2	.2	.2	.2	.1										38	38	89	
56/ 55		.2	.6	.6	.4	.1												22	22	75	
54/ 53		.1	.5	.5	.2													16	16	51	
52/ 51			.7	.1	.2	.1												13	13	29	
50/ 49				.1														2	2	22	
48/ 47																		2	2	7	
46/ 45																				3	
44/ 43																				1	
42/ 41																				1	
40/ 39																				2	
38/ 37																				6	
36/ 35																				9	
TOTAL	3.2	17.2	17.8	16.2	12.9	10.0	8.6	6.7	4.4	2.5	.4							1200	1200	1200	
				</																	

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# PSYCHROMETRIC SUMMARY

5000

PSYCHROMETRIC SUMMARY

JAN 68

5000

5000

14793

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

JUL

MONTH

PAGE 1

NOV 1 (S.T.)

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																															TOTAL		TOTAL	
	0	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	≥31	D.B./W.B.	Dry Bulb	Wet Bulb	Dew Point														
98/ 97											.1							1	1																
96/ 95										.2	.2	.1						5	5																
94/ 93										.2								2	2																
92/ 91										.1	.1	.1						8	8																
90/ 89										.3	.3							19	19																
88/ 87										.4	.4							28	28																
86/ 85					.1	.3	.9	1.2	.8	.2	.2	.1						47	47																
84/ 83				.2	.6	1.0	1.5	.9	.6	.6		.1						65	65																
82/ 81				.2	.2	1.5	2.0	1.5	1.0	.3	.4							88	88																
80/ 79			.1	.5	1.5	2.5	1.5	1.1	.8	.6	.5							114	114																
78/ 77			.6	1.3	2.4	1.8	1.3	.6	.6	.2								111	111	12															
76/ 75		.2	1.3	1.9	1.9	1.4	.6	.6	1.0	.1								110	110	35	3														
74/ 73		1.0	3.1	3.0	3.0	.8	.4	.7	.2	.1								152	152	73	10														
72/ 71	.1	1.4	3.0	1.8	1.6	.8	.2	.2	.1									114	114	152	51														
70/ 69	.3	1.4	4.4	2.3	.6	.5	.3	.1										123	123	220	106														
68/ 67	.1	1.1	3.1	1.0	.5	.3	.1											76	76	188	136														
66/ 65	.1	1.9	1.8	.8	1.0	.3	.2											76	76	183	190														
64/ 63	.1	.9	.7	.6	.5	.2												36	36	129	198														
62/ 61	.2	1.1	.4	.5	.2		.1											31	31	92	145														
60/ 59	.5	.5	.4	.2	.5	.1												20	20	74	94														
58/ 57	.1	.3	.2															8	8	35	83														
56/ 55	.2	.3																6	6	22	55														
54/ 53																				16	41														
52/ 51																				7	44														
50/ 49																				2	31														
48/ 47																					38														
46/ 45																					9														
44/ 43																					4														
38/ 37																					2														
TOTAL	.9	9.8	19.5	16.3	14.5	11.5	9.8	7.8	6.5	3.3	1.9	.3						1240	1240	1240	1240														

Element (X)	$\sum X^2$	$\sum X$	$\bar{X}$	$\sigma_x$	No. Obs.	Mean No. of Hours with Temperature							Total
Rel. Hum.	5953716	83656	67.5	16.563	1240	≤ 0 F	≤ 32 F	≥ 67 F	≥ 73 F	≥ 80 F	≥ 93 F	744.0	
Dry Bulb	6961972	92468	74.6	7.328	1240						637.8	450.0	
Wet Bulb	5532910	82596	66.6	5.019	1240						406.0	72.0	
Dew Point	4831499	77007	62.1	6.300	1240						183.6	21.6	

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# PSYCHROMETRIC SUMMARY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

73-77  
YEARS

AUG  
MONTH

1955

PSYCHROMETRIC SUMMARY

JAN 68

PAGE 1  
HOURS (L.S.T.)

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																		TOTAL		TOTAL D.B./W.B.	Dry Bulb	Wet Bulb	TOTAL	Dew Point
	0	1 - 2	3 - 4	5 - 6	7 - 8	9 - 10	11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 - 24	25 - 26	27 - 28	29 - 30	≥ 31								
96/ 95											.1							1	1						
94/ 93											.1							3	3						
92/ 91											.2							9	9						
90/ 89											.2							10	10						
88/ 87											.2							28	28						
86/ 85											.2							39	39						
84/ 83											.2							54	54						
82/ 81											.2							85	85						
80/ 79											.2							71	71						
78/ 77											.2							93	93						
76/ 75											.2							124	124						
74/ 73											.2							156	156						
72/ 71											.2							144	144						
70/ 69											.2							119	119						
68/ 67											.2							95	95						
66/ 65											.2							66	66						
64/ 63											.2							42	42						
62/ 61											.2							43	43						
60/ 59											.2							23	23						
58/ 57											.2							15	15						
56/ 55											.2							11	11						
54/ 53											.2							5	5						
52/ 51											.2							3	3						
50/ 49											.2														
48/ 47											.2														
46/ 45											.2														
44/ 43											.2														
42/ 41											.2														
40/ 39											.2														
38/ 37											.2														
TOTAL	1.516	.921	.917	.010	.6	9.7	9.8	6.9	3.6	1.8	.2							1240	1240	1239					

Element (X)	$\Sigma X^2$	$\Sigma X$	$\bar{X}$	$\sigma_x$	No. Obs.	Mean No. of Hours with Temperature							Total
Rel. Hum.	6816458	99788	72.5	15.763	1239	≥ 0 F	≥ 32 F	≥ 67 F	≥ 73 F	≥ 80 F	≥ 93 F	Total	
Dry Bulb	6748711	90997	73.4	7.566	1240							746.0	
Wet Bulb	5573176	82850	66.8	5.508	1240							746.0	
Dew Point	5002673	78337	63.2	6.338	1239							746.0	

Mean No. of Hours with Temperature

No. Obs.

$\sigma_x$

$\bar{x}$

$\Sigma x$

$\Sigma x^2$

Element (X)

Rel. Hum.

Dry Bulb

Wet Bulb

Dew Point

Total

≥ 80 F

≥ 73 F

≥ 67 F

≥ 62 F

≥ 57 F

≥ 52 F

≥ 47 F

≥ 42 F

≥ 37 F

≥ 32 F

≥ 27 F

≥ 22 F

≥ 17 F

≥ 12 F

≥ 7 F

≥ 2 F

≥ -3 F

≥ -8 F

≥ -13 F

≥ -18 F

≥ -23 F

≥ -28 F

≥ -33 F

≥ -38 F

≥ -43 F

≥ -48 F

≥ -53 F

≥ -58 F

≥ -63 F

≥ -68 F

≥ -73 F

≥ -78 F

≥ -83 F

≥ -88 F

≥ -93 F

≥ -98 F

≥ -103 F

≥ -108 F

≥ -113 F

≥ -118 F

≥ -123 F

≥ -128 F

≥ -133 F

≥ -138 F

≥ -143 F

≥ -148 F

≥ -153 F

≥ -158 F

≥ -163 F

≥ -168 F

≥ -173 F

≥ -178 F

≥ -183 F

≥ -188 F

≥ -193 F

≥ -198 F

≥ -203 F

≥ -208 F

≥ -213 F

≥ -218 F

≥ -223 F

≥ -228 F

≥ -233 F

≥ -238 F

≥ -243 F

≥ -248 F

≥ -253 F

≥ -258 F

≥ -263 F

≥ -268 F

≥ -273 F

≥ -278 F

≥ -283 F

≥ -288 F

≥ -293 F

≥ -298 F

≥ -303 F

≥ -308 F

≥ -313 F

≥ -318 F

≥ -323 F

≥ -328 F

≥ -333 F

≥ -338 F

≥ -343 F

≥ -348 F

≥ -353 F

≥ -358 F

≥ -363 F

≥ -368 F

≥ -373 F

≥ -378 F

≥ -383 F

≥ -388 F

≥ -393 F

≥ -398 F

≥ -403 F

≥ -408 F

≥ -413 F

≥ -418 F

≥ -423 F

≥ -428 F

≥ -433 F

≥ -438 F

≥ -443 F

≥ -448 F

≥ -453 F

≥ -458 F

≥ -463 F

≥ -468 F

≥ -473 F

≥ -478 F

≥ -483 F

≥ -488 F

≥ -493 F

≥ -498 F

≥ -503 F

≥ -508 F

≥ -513 F

≥ -518 F

≥ -523 F

≥ -528 F

≥ -533 F

≥ -538 F

≥ -543 F

≥ -548 F

≥ -553 F

≥ -558 F

≥ -563 F

≥ -568 F

≥ -573 F

≥ -578 F

≥ -583 F

≥ -588 F

≥ -593 F

≥ -598 F

≥ -603 F

≥ -608 F

≥ -613 F

≥ -618 F

≥ -623 F

≥ -628 F

≥ -633 F

≥ -638 F

≥ -643 F

≥ -648 F

≥ -653 F

≥ -658 F

≥ -663 F

≥ -668 F

≥ -673 F

≥ -678 F

≥ -683 F

≥ -688 F

≥ -693 F

≥ -698 F

≥ -703 F

≥ -708 F

≥ -713 F

≥ -718 F

≥ -723 F

≥ -728 F

≥ -733 F

≥ -738 F

≥ -743 F

≥ -748 F

≥ -753 F

≥ -758 F

≥ -763 F

≥ -768 F

≥ -773 F

≥ -778 F

## PSYCHROMETRIC SUMMARY

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

**SEP**  
**MONTH**

**SEP**  
**MONTH**

**PAGE 1**  
**HOURS (L.S.T.)**

**PAGE 1**  
**HOURS (L.S.T.)**

[illegible]

# PSYCHROMETRIC SUMMARY

14793 STATION NAME: WILLOW GROVE, PENNSYLVANIA 73-77 YEARS: OCT MONTH: 005 PSYCHROMETRIC SUMMARY 0000 JAN 68

PAGE 1  
HOURS (L.S.T.)

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																		TOTAL		TOTAL							
	0	1 - 2	3 - 4	5 - 6	7 - 8	9 - 10	11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 - 24	25 - 26	27 - 28	29 - 30	≥ 31	D.B./W.B.	Wet Bulb	Dew Point								
84/ 83										.1								1	1									
82/ 81									.1									2	2									
80/ 79									.1									1	1									
78/ 77									.1									5	5									
76/ 75						.1	.1	.3	.2	.1								4	4									
74/ 73		.1	.2	.4	.2	.2	.5	.1	.1		.1							15	15	1								
72/ 71	.1	.1	.6	.3	.4	.2	.2	.3	.2	.1								29	29	2								
70/ 69						.2	.3	.4	.2	.2	.2							34	34	1								
68/ 67	.1	.3	.8	.3	.4	.5	.9	.5	.1									47	47	8								
66/ 65	.3	.9	.4	.6	.1	.6	.6	.6	.1									44	44	33								
64/ 63	.2	1.0	1.0	.6	.4	.5	.6	.1	.2									58	58	38								
62/ 61	.5	1.5	.7	1.0	.8	.9	.4	.3	.2									78	78	48								
60/ 59	.2	1.6	1.3	1.0	1.5	1.0	.5	.3	.2									93	93	56								
58/ 57	.9	2.3	1.0	1.3	1.2	.8	.7	.2	.1									105	105	73								
56/ 55	.2	2.6	1.5	2.1	1.0	.7	.6	.2										106	106	94								
54/ 53	.2	1.6	1.5	1.3	1.0	.6	.2	.1										82	82	93								
52/ 51	.2	1.6	1.4	2.1	1.1	.6	.2											89	89	100								
50/ 49	.2	2.2	1.6	1.4	.6	.7	.1											83	83	95								
48/ 47		1.9	2.3	1.5	.4	.5	.2											83	83	106								
46/ 45	.2	2.3	1.9	.8	.2	.6												74	74	110								
44/ 43	.3	1.5	1.5	1.4	.6	.2												67	67	96								
42/ 41	.2	.9	.8	1.1	.6	.2												47	47	65								
40/ 39	.3	.5	.4	.4	.6													27	27	58								
38/ 37		.6	.5	.3	.2													19	19	48								
36/ 35		.1	.4	.4	.1													12	12	30								
34/ 33	.1	.1	.5	.6														15	15	24								
32/ 31		.2	.5	.1														9	9	21								
30/ 29			.3	.1														5	5	13								
28/ 27		.1	.2															4	4	12								
26/ 25		.2																2	2	7								
24/ 23																				2								
22/ 21																				2								
20/ 19																				2								
18/ 17																				2								
16																				2								
14																				2								
12																				2								
10																				2								
8																				2								
6																				2								
4																				2								
2																				2								
0																				2								
Element (X)	ΣX <sup>2</sup>											ΣX		X̄		σ <sub>x</sub>		No. Obs.		Mean No. of Hours with Temperature					Total			
Rel. Hum.																				≥ 67 F					≥ 93 F			
Dry Bulb																						≥ 80 F						
Wet Bulb																						≥ 73 F						
Dew Point																						≥ 67 F						

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# PSYCHROMETRIC SUMMARY

STATION 14793 WILLOW GROVE, PENNSYLVANIA 73-77 YEARS NOV MONTH

PAGE 1  
HOURS (L.S.T.)

05 PSYCHROMETRIC SUMMARY JAN 68

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																	TOTAL		TOTAL	
	0	1 - 2	3 - 4	5 - 6	7 - 8	9 - 10	11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 - 24	25 - 26	27 - 28	29 - 30	≥ 31	D.B./W.B.	Dew Point		
78/ 77								.1	.1	.1								1			
76/ 75								.1	.2	.1	.1							6			
74/ 73					.1			.2	.2	.1								7			
72/ 71								.2	.2									7			
70/ 69			.3		.2	.2	.2	.3	.2	.1	.1							11			
68/ 67		.2	.3	.3	.2	.3	.3	.1										24			
66/ 65		.2	.6	.1	.2	.3	.3											21	1		
64/ 63	.2	.4	.3	.2	.1			.1										15	10		
62/ 61	.4	.5	.4	.2	.2	.2	.2	.1	.1									27	33		
60/ 59	.1	.9	.7	.2	.3	.5	.3	.2										40	15		
58/ 57	.2	1.2	.7	.6	.5	.8	.5	.1										56	22		
56/ 55	.7	2.1	.5	.6	.8	.3	.2											62	34		
54/ 53	.1	2.3	.5	.7	.7	.7	.3	.1										65	48		
52/ 51	.1	2.5	.8	1.0	.8	.6	.4											75	49		
50/ 49	.2	.9	.8	1.0	1.2	.7	.2											60	53		
48/ 47	.1	.9	1.1	1.1	1.2	.8	.1											63	29		
46/ 45	.1	.3	1.6	1.5	1.7	.6	.1											71	59		
44/ 43	.1	.2	1.2	2.2	2.5	.3												78	36		
42/ 41	.2	.7	1.7	2.4	1.3	.4												82	54		
40/ 39	.8	.8	2.0	2.7	.6	.1												84	39		
38/ 37	.4	.4	1.9	2.8	1.0													79	64		
36/ 35	.2	.6	3.1	2.1	.2													74	82		
34/ 33	.5	.7	2.2	.7	.1													79	84		
32/ 31	.3	1.9	2.0	.6														74	95		
30/ 29		1.3	1.2	.5														50	110		
28/ 27	.1	.5	.9	.2														50	39		
26/ 25		.2	.7															58	74		
24/ 23		.3	.3															37	96		
22/ 21			.2															20	75		
20/ 19		.2																10	44		
18/ 17		.2																10	32		
16/ 15		.1																8	16		
14/ 13		.1																2	11		
12/ 11																		3	72		
Element (X)	$\Sigma X^2$		$\Sigma X$		$\bar{X}$		$\sigma_x$		No. Obs.		Mean No. of Hours with Temperature							Total			
Rel. Hum.																					
Dry Bulb																					
Wet Bulb																					
Dew Point																					

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## PSYCHROMETRIC SUMMARY

**14793**  
**STATION**

**WILLOW GROVE, PENNSYLVANIA**

73-77

YEARS

**NOV**  
**MONTH**

**NOV**  
**MONTH**

**PAGE 2**

GE 2  
HOURS (L.S.T.)

[illegible]

# PSYCHROMETRIC SUMMARY

14793 STATION NAME: WILLOW GROVE, PENNSYLVANIA YEARS: 73-77 MONTH: DEC PAGE 1 HOURS (L.S.T.): 0005 PSYCHROMETRIC SUMMARY JAN 68 00010

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																	TOTAL		TOTAL				
	0	1 - 2	3 - 4	5 - 6	7 - 8	9 - 10	11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 - 24	25 - 26	27 - 28	29 - 30	≥ 31	D.B./W.B.	Dry Bulb	Wet Bulb	Dew Point			
66/ 65							.1											1	1					
64/ 63																		1	1					
62/ 61		.5		.1	.1													7	7	6	4			
60/ 59		.2	.1	.2	.2													10	10	5	4			
58/ 57		.3	.1	.2	.2													16	16	7	6			
56/ 55	.2	.4	.2	.3	.2													17	17	14	7			
54/ 53	.2	.5	.3	.3	.2													15	15	15	10			
52/ 51	.2	.5	.2	.2	.1													20	20	20	14			
50/ 49	.2	.6	.2	.2	.2													38	38	20	21			
48/ 47	.3	1.2	.2	.6	.6													50	50	26	20			
46/ 45	.4	1.3	1.0	.8	.3	.2												68	68	34	21			
44/ 43	.5	.8	1.4	1.6	1.0	.2	.1											97	97	43	36			
42/ 41	.8	1.0	2.3	1.9	1.4	.5												92	92	62	23			
40/ 39	.3	1.6	2.1	2.3	.9	.2												119	119	78	36			
38/ 37	.5	2.2	2.9	2.7	1.1	.2												99	99	109	42			
36/ 35	.4	2.1	2.7	1.9	.7	.1												106	106	116	63			
34/ 33	1.0	2.1	3.1	2.1	.2													83	83	118	62			
32/ 31	.6	1.4	3.1	1.6														80	80	106	69			
30/ 29	.5	1.2	4.1	.6														60	60	96	81			
28/ 27	.3	2.5	1.8	.2														52	52	94	71			
26/ 25	.5	2.1	1.5	.2														41	41	63	97			
24/ 23	.2	1.6	1.3	.2														38	38	32	84			
22/ 21		1.2	1.9															45	45	45	74			
20/ 19	.6	2.0	1.0															29	29	44	70			
18/ 17		1.5	.9															13	13	38	63			
16/ 15		1.0	.1															14	14	16	62			
14/ 13	.1	1.0																13	13	15	42			
12/ 11	.1	1.0																7	7	11	48			
10/ 9	.1	.5																1	1	6	28			
8/ 7		.1																1	1	1	28			
6/ 5		.1																			18			
4/ 3																					20			
2/ 1																					9			
0/- 1																								
Element (X)	$\Sigma X^2$		$\Sigma X$		$\bar{X}$		$\sigma_x$		No. Obs.		Mean No. of Hours with Temperature						Total							
Rel. Hum.											≤ 0 F		≥ 32 F		≥ 67 F		≥ 73 F		≥ 80 F		≥ 93 F		Total	
Dry Bulb																								
Wet Bulb																								
Dew Point																								

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# PSYCHROMETRIC SUMMARY

STATION 14793 WILLOW GROVE, PENNSYLVANIA 73-77 YEARS ALL MONTH PAGE 1 HOURS (L.S.T.)

55 PSYCHROMETRIC SUMMARY JAN 68

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																															TOTAL		TOTAL		
	0	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	≥31	D.B./W.B.	Dry Bulb	Wet Bulb	Dew Point															
98/ 97																																	1	1		
96/ 95																																	6	6		
94/ 93																																	5	5		
92/ 91																																	26	26		
90/ 89																																	41	41		
88/ 87																																	88	88		
86/ 85																																	122	122		
84/ 83																																	189	189		
82/ 81																																	258	258		1
80/ 79																																	323	323		3
78/ 77																																	378	378		32
76/ 75																																	451	451		127
74/ 73																																	587	587		244
72/ 71																																	589	589		441
70/ 69																																	596	596		666
68/ 67																																	550	550		689
66/ 65																																	522	522		735
64/ 63																																	474	474		642
62/ 61																																	506	506		620
60/ 59																																	537	537		602
58/ 57																																	492	492		564
56/ 55																																	513	513		538
54/ 53																																	455	455		553
52/ 51																																	474	474		489
50/ 49																																	441	441		482
48/ 47																																	487	487		457
46/ 45																																	473	473		506
44/ 43																																	515	515		471
42/ 41																																	534	534		525
40/ 39																																	476	476		503
38/ 37																																	542	542		559
36/ 35																																	466	466		600
34/ 33																																	445	445		547
32/ 31																																				

STATION	STATION NAME
14793	WILLOW GROVE, PENNSYLVANIA

73-77

YEARS

ALL MONTH

## PSYCHROMETRIC SUMMA

JAN 68

**PAGE 2**  
HOURS (L.S.)

Temp. (F)	WET BULB TEMPERATURE DEPRESSION (F)																TOTAL		TOTAL		
																	D.B./W.B.		Dry Bulb	Wet Bulb	Total
	0	1 - 2	3 - 4	5 - 6	7 - 8	9 - 10	11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 - 24	25 - 26	27 - 28	29 - 30	≥ 31				
30/- 29	.1	.5	.9	.5	.0													312	312	486	476
28/- 27	.1	.6	.2	.3	.0													267	267	379	491
26/- 25	.1	.5	.4	.2	.0													236	236	343	495
24/- 23	.1	.5	.7	.1														187	187	300	447
22/- 21	.0	.3	.5	.0														135	136	213	388
20/- 19	.1	.6	.3															137	137	173	344
18/- 17	.0	.5	.3	.0														122	122	156	284
16/- 15	.0	.4	.1															78	78	137	264
14/- 13	.0	.3	.1															54	54	81	263
12/- 11	.0	.3	.0															42	42	62	225
10/- 9	.0	.2	.0															31	31	46	214
8/- 7	.1	.0																17	17	22	175
6/- 5	.1																	13	13	21	143
4/- 3	.0	.0																7	7	14	95
2/- 1	.0	.0																1	1	2	67
0/- 1	.0	.0																6	6	4	42
- 2/- 3	.0	.0																2	2	4	39
- 4/- 5	.0	.0																1	1	1	18
- 6/- 7	.0																	1	1	1	19
- 8/- 9																					14
-10/-11																					9
-12/-13																					8
-14/-15																					4
-16/-17																					2
-18/-19																					1
TOTAL	5.321	2.223	4.17	1.11	5	8.1	5.7	3.8	2.1	1.1	.4	.2	.0	.0				14608	14608	14605	14605
																		14606		14606	
		</																			

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## MEANS AND STANDARD DEVIATIONS

5707 MEANS AND STANDARD DEVIATIONS JAN 68

DRY-BULB TEMPERATURES DEG F FROM HOURLY OBSERVATIONS

73-77

WILLOW GROVE, PENNSYLVANIA

14793

YEARS

STATION NAME

STATION

HRS.(LST.)	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ANNUAL
01	MEAN 29.1 S.D. 11.770 TOTAL OBS 155	30.8 10.563 141	39.5 8.607 155	47.4 9.712 150	55.7 7.750 155	65.0 6.132 150	69.2 4.789 155	68.3 5.366 155	60.9 7.108 150	50.1 8.237 155	42.9 10.420 150	32.5 10.143 155	49.4 16.433 1826
04	MEAN 27.9 S.D. 11.889 TOTAL OBS 155	29.6 10.544 141	38.1 8.545 155	45.6 9.690 150	53.7 7.892 155	63.2 6.399 150	67.1 5.169 155	66.8 5.773 155	59.4 7.449 150	48.8 8.831 155	41.5 10.224 150	32.0 10.564 155	47.9 16.281 1826
07	MEAN 27.3 S.D. 11.962 TOTAL OBS 155	28.7 10.590 141	37.5 8.745 155	46.9 9.824 150	56.7 7.390 155	66.1 6.033 150	69.9 4.488 155	68.4 5.476 155	59.9 7.489 150	48.3 8.892 155	40.7 10.560 150	31.4 10.296 155	48.6 17.297 1826
10	MEAN 31.2 S.D. 11.368 TOTAL OBS 155	34.0 10.818 141	43.7 9.443 155	54.0 11.572 150	63.9 8.496 155	72.5 6.876 150	77.1 4.817 155	76.2 5.341 155	68.2 7.122 150	56.5 8.179 155	47.3 10.193 150	35.2 9.479 155	55.1 18.330 1826
13	MEAN 35.2 S.D. 11.592 TOTAL OBS 155	38.3 11.385 141	48.1 10.233 155	58.3 12.433 150	68.0 9.346 155	76.7 7.453 150	81.4 5.230 155	80.4 5.919 155	72.7 7.653 150	61.1 8.808 155	51.7 11.121 150	38.9 9.528 155	59.3 18.671 1826
16	MEAN 36.0 S.D. 11.517 TOTAL OBS 155	39.8 11.639 141	49.3 9.989 155	59.6 12.541 150	68.7 9.664 155	77.3 7.714 150	82.0 5.721 155	80.5 6.067 155	72.8 7.714 150	61.2 8.664 155	51.3 11.026 150	38.9 9.494 155	59.9 18.594 1826
19	MEAN 32.3 S.D. 11.495 TOTAL OBS 155	35.8 10.994 141	45.3 8.683 155	55.2 11.180 150	64.7 8.770 155	73.4 6.606 150	77.8 5.087 155	75.8 5.052 155	67.0 6.859 150	55.3 7.798 155	46.6 10.402 150	35.4 9.475 155	55.5 17.979 1826
22	MEAN 30.3 S.D. 11.407 TOTAL OBS 155	33.1 10.883 141	41.9 8.326 155	50.6 10.289 150	59.1 8.026 155	67.8 6.020 150	72.2 4.486 155	70.7 5.281 155	63.0 6.771 150	52.0 8.171 155	44.4 10.360 150	33.5 9.675 155	51.6 16.802 1826
ALL HOURS	MEAN 31.2 S.D. 11.972 TOTAL OBS 1240	33.8 11.528 1120	42.9 9.991 1240	52.2 12.030 1200	61.3 10.003 1240	70.3 8.376 1200	74.6 7.329 1240	73.4 7.566 1240	65.5 8.879 1200	54.1 9.726 1240	45.8 11.224 1200	34.7 10.190 1240	53.4 18.117 14608

# MEANS AND STANDARD DEVIATIONS

WET-BULB TEMPERATURES DEG F FROM HOURLY OBSERVATIONS

73-77

WILLOW GROVE, PENNSYLVANIA

14793

STATION NAME

YEARS

HRS.(LST.)	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ANNUAL
01	MEAN 26.3 S. D. 11.310 TOTAL OBS 155	MEAN 27.8 S. D. 9.996 TOTAL OBS 141	MEAN 35.7 S. D. 8.510 TOTAL OBS 155	MEAN 42.4 S. D. 9.395 TOTAL OBS 150	MEAN 51.9 S. D. 7.992 TOTAL OBS 155	MEAN 61.2 S. D. 6.279 TOTAL OBS 150	MEAN 64.6 S. D. 4.927 TOTAL OBS 155	MEAN 64.9 S. D. 5.271 TOTAL OBS 155	MEAN 57.9 S. D. 7.225 TOTAL OBS 150	MEAN 46.8 S. D. 8.670 TOTAL OBS 155	MEAN 39.1 S. D. 10.327 TOTAL OBS 150	MEAN 30.0 S. D. 9.938 TOTAL OBS 155	MEAN 45.8 S. D. 16.115 TOTAL OBS 1826
04	MEAN 25.4 S. D. 11.456 TOTAL OBS 155	MEAN 26.9 S. D. 10.027 TOTAL OBS 141	MEAN 34.8 S. D. 8.665 TOTAL OBS 155	MEAN 41.4 S. D. 9.568 TOTAL OBS 150	MEAN 50.7 S. D. 8.195 TOTAL OBS 155	MEAN 60.4 S. D. 6.509 TOTAL OBS 150	MEAN 63.7 S. D. 5.281 TOTAL OBS 155	MEAN 64.1 S. D. 5.728 TOTAL OBS 155	MEAN 56.8 S. D. 7.562 TOTAL OBS 150	MEAN 45.9 S. D. 9.240 TOTAL OBS 155	MEAN 38.3 S. D. 10.458 TOTAL OBS 150	MEAN 29.5 S. D. 10.351 TOTAL OBS 155	MEAN 44.9 S. D. 16.214 TOTAL OBS 1826
07	MEAN 24.9 S. D. 11.523 TOTAL OBS 154	MEAN 26.3 S. D. 10.085 TOTAL OBS 141	MEAN 34.6 S. D. 8.829 TOTAL OBS 155	MEAN 42.5 S. D. 9.599 TOTAL OBS 150	MEAN 52.8 S. D. 7.831 TOTAL OBS 155	MEAN 62.3 S. D. 5.989 TOTAL OBS 150	MEAN 65.3 S. D. 4.654 TOTAL OBS 155	MEAN 65.2 S. D. 5.513 TOTAL OBS 155	MEAN 57.6 S. D. 7.452 TOTAL OBS 150	MEAN 45.7 S. D. 9.311 TOTAL OBS 155	MEAN 37.8 S. D. 10.727 TOTAL OBS 150	MEAN 29.0 S. D. 10.199 TOTAL OBS 155	MEAN 45.4 S. D. 16.878 TOTAL OBS 1825
10	MEAN 28.1 S. D. 10.963 TOTAL OBS 155	MEAN 30.3 S. D. 9.918 TOTAL OBS 140	MEAN 38.7 S. D. 9.185 TOTAL OBS 155	MEAN 46.3 S. D. 9.765 TOTAL OBS 150	MEAN 56.7 S. D. 8.135 TOTAL OBS 155	MEAN 64.9 S. D. 6.006 TOTAL OBS 150	MEAN 67.8 S. D. 4.299 TOTAL OBS 155	MEAN 68.3 S. D. 5.012 TOTAL OBS 155	MEAN 61.4 S. D. 7.004 TOTAL OBS 150	MEAN 50.5 S. D. 8.501 TOTAL OBS 155	MEAN 42.2 S. D. 10.256 TOTAL OBS 150	MEAN 31.8 S. D. 9.362 TOTAL OBS 155	MEAN 49.0 S. D. 16.547 TOTAL OBS 1825
13	MEAN 30.8 S. D. 10.535 TOTAL OBS 155	MEAN 33.0 S. D. 9.676 TOTAL OBS 141	MEAN 41.3 S. D. 9.167 TOTAL OBS 155	MEAN 48.5 S. D. 9.503 TOTAL OBS 150	MEAN 58.3 S. D. 7.769 TOTAL OBS 155	MEAN 66.3 S. D. 6.018 TOTAL OBS 150	MEAN 69.0 S. D. 4.668 TOTAL OBS 155	MEAN 69.3 S. D. 5.143 TOTAL OBS 155	MEAN 62.9 S. D. 6.777 TOTAL OBS 150	MEAN 52.6 S. D. 8.354 TOTAL OBS 155	MEAN 44.6 S. D. 10.185 TOTAL OBS 150	MEAN 34.2 S. D. 8.920 TOTAL OBS 155	MEAN 51.0 S. D. 15.974 TOTAL OBS 1826
16	MEAN 31.3 S. D. 10.383 TOTAL OBS 155	MEAN 33.8 S. D. 9.718 TOTAL OBS 141	MEAN 41.8 S. D. 8.534 TOTAL OBS 155	MEAN 48.9 S. D. 9.430 TOTAL OBS 150	MEAN 58.4 S. D. 7.728 TOTAL OBS 155	MEAN 66.1 S. D. 5.817 TOTAL OBS 150	MEAN 68.8 S. D. 4.399 TOTAL OBS 155	MEAN 69.3 S. D. 4.702 TOTAL OBS 155	MEAN 62.7 S. D. 6.602 TOTAL OBS 150	MEAN 52.2 S. D. 8.049 TOTAL OBS 155	MEAN 44.1 S. D. 10.238 TOTAL OBS 150	MEAN 34.1 S. D. 9.086 TOTAL OBS 155	MEAN 51.1 S. D. 15.726 TOTAL OBS 1826
19	MEAN 28.8 S. D. 10.906 TOTAL OBS 155	MEAN 31.3 S. D. 10.036 TOTAL OBS 141	MEAN 39.4 S. D. 8.257 TOTAL OBS 155	MEAN 46.7 S. D. 9.364 TOTAL OBS 150	MEAN 56.5 S. D. 7.657 TOTAL OBS 155	MEAN 64.5 S. D. 5.783 TOTAL OBS 150	MEAN 67.8 S. D. 4.401 TOTAL OBS 155	MEAN 67.7 S. D. 4.695 TOTAL OBS 155	MEAN 60.4 S. D. 6.519 TOTAL OBS 150	MEAN 49.5 S. D. 8.114 TOTAL OBS 155	MEAN 41.6 S. D. 10.215 TOTAL OBS 150	MEAN 31.8 S. D. 9.319 TOTAL OBS 155	MEAN 48.9 S. D. 16.069 TOTAL OBS 1826
22	MEAN 27.2 S. D. 10.835 TOTAL OBS 155	MEAN 29.6 S. D. 10.304 TOTAL OBS 141	MEAN 37.4 S. D. 8.284 TOTAL OBS 155	MEAN 44.1 S. D. 9.246 TOTAL OBS 150	MEAN 54.1 S. D. 8.027 TOTAL OBS 155	MEAN 62.4 S. D. 6.110 TOTAL OBS 150	MEAN 65.9 S. D. 4.585 TOTAL OBS 155	MEAN 65.8 S. D. 5.167 TOTAL OBS 155	MEAN 58.9 S. D. 6.747 TOTAL OBS 150	MEAN 47.9 S. D. 8.590 TOTAL OBS 155	MEAN 40.2 S. D. 10.275 TOTAL OBS 150	MEAN 30.7 S. D. 9.591 TOTAL OBS 155	MEAN 47.1 S. D. 16.034 TOTAL OBS 1826
ALL HOURS	MEAN 27.8 S. D. 11.185 TOTAL OBS 1239	MEAN 29.9 S. D. 10.268 TOTAL OBS 1127	MEAN 38.0 S. D. 9.053 TOTAL OBS 1240	MEAN 45.1 S. D. 9.837 TOTAL OBS 1200	MEAN 54.9 S. D. 8.371 TOTAL OBS 1240	MEAN 63.5 S. D. 6.399 TOTAL OBS 1200	MEAN 66.6 S. D. 5.020 TOTAL OBS 1240	MEAN 66.8 S. D. 5.508 TOTAL OBS 1240	MEAN 59.8 S. D. 7.316 TOTAL OBS 1200	MEAN 48.9 S. D. 8.964 TOTAL OBS 1240	MEAN 41.0 S. D. 10.587 TOTAL OBS 1200	MEAN 31.4 S. D. 9.760 TOTAL OBS 1240	MEAN 47.9 S. D. 16.355 TOTAL OBS 14606

# MEANS AND STANDARD DEVIATIONS

5707 MEANS AND STANDARD DEVIATIONS JAN 68

DEW-POINT TEMPERATURES DEG F FROM HOURLY OBSERVATIONS

73-77

WILLOW GROVE, PENNSYLVANIA

14793

STATION NAME

YEARS

HRS.(L.S.T.)	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ANNUAL
01	MEAN 19.3 S.D. 14.114 TOTAL OBS 155	20.6 12.913 141	29.0 12.163 155	35.6 12.499 150	48.2 10.131 155	58.6 7.575 150	61.9 6.043 155	62.9 5.901 155	55.7 8.171 150	43.1 10.746 155	33.7 12.712 150	24.3 12.316 155	41.2 18.872 1826
04	MEAN 18.8 S.D. 14.154 TOTAL OBS 155	20.1 12.630 141	28.8 12.019 155	35.6 12.400 150	47.7 10.000 155	58.5 7.360 150	61.6 6.086 155	62.5 6.207 155	54.9 8.351 150	42.7 11.140 155	33.4 12.757 150	24.0 12.570 155	40.8 18.883 1826
07	MEAN 18.5 S.D. 14.114 TOTAL OBS 155	20.2 12.466 141	29.1 12.007 155	36.7 12.216 150	49.2 9.987 155	59.8 6.808 150	62.6 5.690 155	63.3 6.173 155	55.8 8.162 150	42.7 11.177 155	33.1 12.898 150	23.2 12.565 155	41.3 19.264 1825
10	MEAN 21.0 S.D. 14.028 TOTAL OBS 155	22.3 12.872 140	30.9 13.125 155	37.3 12.743 150	50.6 10.846 155	60.2 7.476 150	62.6 6.317 155	64.1 6.459 155	56.6 9.006 150	44.3 11.577 155	35.5 13.305 150	25.2 12.105 155	42.7 18.950 1825
13	MEAN 21.9 S.D. 13.574 TOTAL OBS 155	23.2 12.451 141	31.5 13.540 155	37.7 12.759 150	50.5 10.738 155	60.0 7.838 150	62.0 7.125 155	63.5 6.992 155	56.4 9.204 150	44.3 11.903 155	35.9 13.136 150	26.0 11.707 155	42.0 18.556 1826
16	MEAN 21.9 S.D. 13.441 TOTAL OBS 155	22.9 12.959 141	31.2 13.230 155	37.1 13.332 150	50.3 11.200 155	59.4 7.746 150	61.6 6.679 155	63.2 6.655 155	55.8 9.190 150	43.4 11.932 155	34.8 13.838 150	25.5 12.237 155	42.3 18.624 1826
19	MEAN 20.7 S.D. 13.960 TOTAL OBS 155	22.4 13.257 141	30.2 13.113 155	36.5 13.245 150	49.5 10.798 155	58.9 8.094 150	62.2 6.439 155	63.2 6.499 155	55.7 8.310 150	43.3 11.190 155	34.7 12.976 150	24.8 12.178 155	41.9 18.759 1826
22	MEAN 19.6 S.D. 13.644 TOTAL OBS 155	21.9 13.409 141	29.9 12.522 155	35.9 12.659 150	49.6 10.468 155	58.8 7.860 150	62.3 5.960 155	63.1 5.750 154	55.9 7.916 150	43.4 10.922 155	34.2 12.726 150	24.7 11.995 155	41.7 18.785 1825
ALL HOURS	MEAN 20.2 S.D. 13.900 TOTAL OBS 1239	21.7 12.885 1127	30.1 12.729 1240	36.5 12.721 1200	49.4 10.545 1240	59.3 7.608 1200	62.1 6.300 1240	63.2 6.339 1239	55.9 8.540 1200	43.4 11.314 1240	34.4 13.044 1200	24.7 12.205 1240	41.8 18.845 14605

# RELATIVE HUMIDITY

5706 RELATIVE HUMIDITY JAN 68

JAN  
MONTH

PERIOD

73-77

WILLOW GROVE, PENNSYLVANIA  
STATION NAME

14793  
STATION

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF RELATIVE HUMIDITY GREATER THAN									MEAN RELATIVE HUMIDITY	TOTAL NO. OF OBS.
		10%	20%	30%	40%	50%	60%	70%	80%	90%		
JAN	01	100.0	100.0	100.0	96.8	89.0	67.1	41.3	21.3	7.7	67.6	155
	04	100.0	100.0	100.0	96.7	88.4	69.0	49.7	23.2	9.7	69.5	155
	07	100.0	100.0	100.0	97.4	92.2	74.0	53.9	26.0	7.8	70.6	154
	10	100.0	100.0	100.0	96.8	82.6	62.6	40.0	22.6	8.4	67.0	155
	13	100.0	100.0	96.8	87.1	68.4	47.7	28.4	15.5	4.5	60.6	155
	16	100.0	100.0	97.4	82.6	63.2	45.2	27.1	12.3	4.5	58.7	155
	19	100.0	100.0	100.0	91.6	75.5	57.4	34.2	18.1	4.5	63.7	155
	22	100.0	100.0	99.4	94.8	83.9	59.4	36.1	21.3	7.1	65.9	155
TOTALS		100.0	100.0	99.2	93.2	80.4	60.3	38.8	20.0	6.8	65.5	1239

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5706 RELATIVE HUMIDITY JAN 68

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STATION  
14793

**WILLOW GROVE, PENNSYLVANIA**

73-77

PERIOD

**FEB**  
**MONTH**

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF RELATIVE HUMIDITY GREATER THAN									MEAN RELATIVE HUMIDITY	TOTAL NO. OF OBS.
		10%	20%	30%	40%	50%	60%	70%	80%	90%		
FEB	01	100.0	99.3	99.3	96.5	82.3	61.7	38.3	22.7	11.3	67.3	141
	04	100.0	100.0	99.3	99.3	84.4	66.7	46.8	25.5	12.1	69.0	141
	07	100.0	100.0	100.0	97.9	90.8	71.6	50.4	32.6	14.9	71.7	141
	10	100.0	100.0	98.6	92.9	75.0	52.1	35.7	22.1	12.1	64.3	140
	13	100.0	100.0	95.0	78.7	56.0	34.0	24.1	19.1	8.5	57.3	141
	16	100.0	99.3	89.4	73.0	48.2	34.0	24.8	14.2	6.4	54.3	141
	19	100.0	100.0	97.2	85.1	66.7	43.3	29.1	17.0	9.2	60.6	141
	22	100.0	100.0	99.3	92.2	76.6	56.7	35.5	22.0	12.8	65.3	141
TOTALS		100.0	99.8	97.3	89.5	72.5	52.5	35.6	21.9	10.9	63.7	1127

## RELATIVE HUMIDITY

STATION  
14793

**WILLOW GROVE, PENNSYLVANIA**

73-77

PERIOD

MAR  
MONTH

MONTH

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF RELATIVE HUMIDITY GREATER THAN									MEAN RELATIVE HUMIDITY	TOTAL NO. OF OBS.
		10%	20%	30%	40%	50%	60%	70%	80%	90%		
MAR	01	100.0	100.0	97.4	92.3	79.4	63.9	45.8	29.0	16.8	68.5	155
	04	100.0	100.0	98.7	93.5	85.8	69.0	52.9	36.1	20.0	71.5	155
	07	100.0	100.0	100.0	95.5	89.7	73.5	52.9	42.6	23.9	73.6	155
	10	100.0	100.0	97.4	86.5	66.5	49.0	37.4	23.9	16.1	63.7	155
	13	100.0	99.4	89.7	69.0	50.3	37.4	26.5	20.6	14.2	56.8	155
	16	100.0	98.7	80.0	65.2	46.5	32.9	29.0	20.0	15.5	54.6	155
	19	100.0	98.7	89.7	76.1	59.4	41.9	32.3	24.5	16.1	59.8	155
	22	100.0	100.0	95.5	88.4	70.3	55.5	42.6	28.4	16.1	65.4	155
TOTALS		100.0	99.6	93.6	83.3	68.5	52.9	39.9	28.1	17.3	64.2	1260



5706 RELATIVE HUMIDITY JAN 68

MAY  
MONTH

73-77

WILLOW GROVE, PENNSYLVANIA

STATION  
14793

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF RELATIVE HUMIDITY GREATER THAN									MEAN RELATIVE HUMIDITY	TOTAL NO. OF OBS.
		10%	20%	30%	40%	50%	60%	70%	80%	90%		
MAY	01	100.0	100.0	100.0	97.4	95.5	85.2	67.7	49.0	20.6	77.7	155
	04	100.0	100.0	100.0	100.0	95.5	89.0	78.7	55.5	29.7	81.3	155
	07	100.0	100.0	100.0	98.7	94.8	81.3	69.0	44.5	21.3	76.9	155
	10	100.0	100.0	99.4	91.0	77.4	54.2	37.4	21.3	9.7	64.5	155
	13	100.0	100.0	94.8	80.0	54.2	36.8	25.2	15.5	5.8	56.7	155
	16	100.0	97.4	91.6	74.8	53.5	36.1	26.5	14.2	5.2	55.6	155
	19	100.0	99.4	95.5	83.2	62.6	50.3	34.8	18.7	10.3	61.3	155
	22	100.0	100.0	98.7	96.1	89.0	75.5	56.8	38.1	16.8	73.0	155
TOTALS		100.0	99.6	97.5	90.2	77.8	63.6	49.5	32.1	14.9	68.6	1260

**MONTH**  
**JUN**

PERIOD

73-77

PENNSYLVANIA

STATION  
14793

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF RELATIVE HUMIDITY GREATER THAN									MEAN RELATIVE HUMIDITY	TOTAL NO. OF OBS.
		10%	20%	30%	40%	50%	60%	70%	80%	90%		
JUN	01	100.0	100.0	100.0	100.0	98.7	92.7	81.3	60.0	19.3	80.7	150
	04	100.0	100.0	100.0	100.0	100.0	98.7	91.3	72.7	28.7	85.1	150
	07	100.0	100.0	100.0	100.0	100.0	100.0	84.7	53.3	18.0	80.8	150
	10	100.0	100.0	100.0	100.0	86.7	64.7	39.3	20.7	6.0	67.1	150
	13	100.0	100.0	100.0	87.3	69.3	42.0	15.3	9.3	4.0	58.3	150
	16	100.0	100.0	99.3	84.7	58.7	34.0	18.0	10.0	2.7	56.2	150
	19	100.0	100.0	97.3	92.7	76.0	51.3	30.7	15.3	4.7	62.5	150
	22	100.0	100.0	100.0	98.7	94.7	84.0	56.7	37.3	14.7	74.2	150
TOTALS		100.0	100.0	99.6	95.4	85.5	70.9	52.4	34.8	12.3	70.6	1200

14793

WILLOW GROVE, PENNSYLVANIA

73-77

PERIOD

MONTH

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF RELATIVE HUMIDITY GREATER THAN									MEAN RELATIVE HUMIDITY	TOTAL NO. OF OBS.
		10%	20%	30%	40%	50%	60%	70%	80%	90%		
JUL	01	100.0	100.0	100.0	99.4	99.4	92.9	78.7	49.7	8.4	78.3	155
	04	100.0	100.0	100.0	100.0	99.4	96.7	90.3	66.5	15.5	83.1	155
	07	100.0	100.0	100.0	100.0	99.4	96.8	75.5	53.5	7.7	78.5	155
	10	100.0	100.0	100.0	98.7	79.4	51.0	29.0	9.7	3.2	62.4	155
	13	100.0	100.0	98.7	81.3	56.8	26.5	9.7	4.5	1.9	53.2	155
	16	100.0	100.0	99.4	78.1	47.7	22.6	12.3	7.7	.6	52.0	155
	19	100.0	100.0	100.0	94.2	72.9	45.2	18.7	11.0	2.6	60.3	155
	22	100.0	100.0	100.0	100.0	97.4	85.2	57.4	22.6	3.2	71.9	155
TOTALS		100.0	100.0	99.8	94.0	81.6	64.9	46.5	28.2	5.6	67.5	1260

## RELATIVE HUMIDITY

5706 RELATIVE HUMIDITY JAN 68

**AUG**  
**MONTH**

73-77

WILLOW GROVE, PENNSYLVANIA

14793  
STATION

STATION NAME

2010

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF RELATIVE HUMIDITY GREATER THAN									MEAN RELATIVE HUMIDITY	TOTAL NO. OF OBS.
		10%	20%	30%	40%	50%	60%	70%	80%	90%		
AUG	01	100.0	100.0	100.0	100.0	100.0	98.7	93.5	69.0	13.5	83.2	155
	04	100.0	100.0	100.0	100.0	100.0	100.0	96.1	78.7	26.4	86.3	155
	07	100.0	100.0	100.0	100.0	100.0	99.4	94.2	67.7	20.0	84.3	155
	10	100.0	100.0	100.0	100.0	93.5	66.5	37.4	16.1	2.6	67.3	155
	13	100.0	100.0	100.0	95.5	67.7	38.1	16.1	6.5	.6	57.7	155
	16	100.0	100.0	99.4	90.3	59.4	33.5	20.0	9.7	4.5	57.4	155
	19	100.0	100.0	100.0	99.4	89.7	60.0	38.1	16.1	3.9	66.4	155
	22	100.0	100.0	100.0	100.0	100.0	96.8	74.7	39.6	5.8	77.1	154
TOTALS		100.0	100.0	99.9	98.2	88.8	74.1	58.8	37.9	9.9	72.5	1239

NAVWEASERVCOM

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**SEP**  
**MONTH**

**SEP**  
**MONTH**

PERIOD

73-77

**PENNSYLVANIA**  
**STATION NAME**

14793

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF RELATIVE HUMIDITY GREATER THAN									MEAN RELATIVE HUMIDITY	TOTAL NO. OF OBS.
		10%	20%	30%	40%	50%	60%	70%	80%	90%		
SEP	01	100.0	100.0	100.0	100.0	100.0	98.0	91.3	63.3	21.3	83.4	150
	04	100.0	100.0	100.0	100.0	100.0	98.7	96.0	72.7	25.3	85.4	150
	07	100.0	100.0	100.0	100.0	100.0	99.3	93.3	77.3	34.0	86.8	150
	10	100.0	100.0	100.0	98.7	88.7	68.0	43.3	21.3	6.7	68.1	150
	13	100.0	100.0	100.0	87.3	66.7	39.3	21.3	10.7	3.3	58.6	150
	16	100.0	100.0	98.0	82.7	58.7	36.0	22.7	12.7	5.3	57.5	150
	19	100.0	100.0	100.0	99.3	86.7	68.7	44.0	23.3	6.7	68.6	150
	22	100.0	100.0	100.0	100.0	100.0	93.3	74.7	51.3	14.0	78.6	150
TOTALS		100.0	100.0	99.8	96.0	87.6	75.2	60.8	41.6	14.6	73.4	1200

## RELATIVE HUMIDITY

14793

WILLOW GROVE, PENNSYLVANIA

73-77

130

STATION NAME

PERIOD

MONTH

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF RELATIVE HUMIDITY GREATER THAN									MEAN RELATIVE HUMIDITY	TOTAL NO. OF OBS.
		10%	20%	30%	40%	50%	60%	70%	80%	90%		
OCT	01	100.0	100.0	100.0	100.0	98.1	86.5	71.6	43.9	17.4	77.9	155
	04	100.0	100.0	100.0	99.4	98.1	91.6	77.4	55.5	22.6	80.4	155
	07	100.0	100.0	100.0	100.0	99.4	92.9	78.1	57.4	28.4	81.7	155
	10	100.0	100.0	100.0	95.5	78.7	55.5	34.8	24.5	10.3	65.7	155
	13	100.0	100.0	96.1	81.9	54.2	34.8	23.2	16.1	7.1	56.7	155
	16	100.0	100.0	93.5	76.1	49.0	33.5	22.6	15.5	5.2	55.1	155
	19	100.0	100.0	99.4	93.5	83.2	57.4	36.8	20.0	9.0	65.8	155
	22	100.0	100.0	100.0	98.7	95.5	81.3	57.4	34.2	12.3	73.6	155
TOTALS		100.0	100.0	98.6	93.1	82.0	66.7	50.2	33.4	14.0	69.6	1240

# RELATIVE HUMIDITY

5706 RELATIVE HUMIDITY JAN 68

NOV  
MONTH

73-77

WILLOW GROVE, PENNSYLVANIA

14793  
STATION

PERIOD

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF RELATIVE HUMIDITY GREATER THAN									MEAN RELATIVE HUMIDITY	TOTAL NO. OF OBS.
		10%	20%	30%	40%	50%	60%	70%	80%	90%		
NOV	01	100.0	100.0	100.0	98.7	93.3	71.3	48.7	25.3	14.7	71.1	150
	04	100.0	100.0	100.0	100.0	95.3	79.3	54.7	32.7	16.7	73.8	150
	07	100.0	100.0	100.0	99.3	98.0	84.0	61.3	37.3	18.0	75.3	150
	10	100.0	100.0	100.0	98.0	75.3	47.3	36.7	24.7	14.0	65.7	150
	13	100.0	100.0	100.0	82.0	50.7	33.3	22.0	17.3	6.7	57.0	150
	16	100.0	100.0	96.0	75.3	48.0	32.0	24.7	18.0	8.0	56.1	150
	19	100.0	100.0	95.3	95.3	82.0	50.0	33.3	22.7	9.3	65.0	150
	22	100.0	100.0	99.3	98.7	92.0	63.3	38.7	22.0	13.3	68.6	150
TOTALS		100.0	100.0	99.3	93.4	79.3	57.6	40.0	25.0	12.6	66.6	1200

## RELATIVE HUMIDITY

STATION  
14793

**WILLOW GROVE, PENNSYLVANIA**

73-77

PERIOD

**DEC**  
**MONTH**

MONTH

CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE  
(FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF RELATIVE HUMIDITY GREATER THAN									MEAN RELATIVE HUMIDITY	TOTAL NO. OF OBS.
		10%	20%	30%	40%	50%	60%	70%	80%	90%		
DEC	01	100.0	100.0	100.0	100.0	92.9	78.7	51.6	32.3	16.8	72.9	155
	04	100.0	100.0	100.0	100.0	94.8	78.7	54.2	34.2	17.4	73.3	155
	07	100.0	100.0	100.0	99.4	94.2	75.5	55.5	32.9	14.8	72.7	155
	10	100.0	100.0	99.4	98.1	83.2	65.2	43.2	23.9	13.5	68.4	155
	13	100.0	100.0	100.0	90.3	68.4	47.7	29.0	18.1	9.0	61.5	155
	16	100.0	100.0	98.1	84.5	69.7	44.5	29.0	15.5	6.5	60.8	155
	19	100.0	100.0	98.7	94.2	80.6	67.1	38.1	24.5	8.4	66.8	155
	22	100.0	100.0	100.0	98.7	91.0	76.1	52.3	25.2	13.5	71.2	155
TOTALS		100.0	100.0	99.5	95.7	84.4	66.7	44.1	25.8	12.5	68.5	1240

# RELATIVE HUMIDITY

5706 RELATIVE HUMIDITY JAN 68

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14793 STATION NAME WILLIAM GROVE, PENNSYLVANIA PERIOD 73-77 MONTH ALL

## CUMULATIVE PERCENTAGE FREQUENCY OF OCCURRENCE (FROM HOURLY OBSERVATIONS)

MONTH	HOURS (L.S.T.)	PERCENTAGE FREQUENCY OF RELATIVE HUMIDITY GREATER THAN									MEAN RELATIVE HUMIDITY	TOTAL NO. OF OBS.
		10%	20%	30%	40%	50%	60%	70%	80%	90%		
JAN	ALL	100.0	100.0	99.2	93.2	80.4	60.3	38.8	20.0	6.8	65.5	1239
FEB		100.0	99.8	97.3	89.5	72.5	52.5	35.6	21.9	10.9	63.7	1127
MAR		100.0	99.6	93.6	83.3	68.5	52.9	39.9	28.1	17.3	64.2	1240
APR		100.0	98.7	90.7	77.6	61.4	45.5	31.2	19.8	11.0	59.3	1200
MAY		100.0	99.6	97.5	90.2	77.8	63.6	49.5	32.1	14.9	68.4	1240
JUN		100.0	100.0	99.6	95.4	85.5	70.9	52.4	34.8	12.3	70.6	1200
JUL		100.0	100.0	99.8	94.0	81.6	64.9	46.5	28.2	5.4	67.5	1240
AUG		100.0	100.0	99.9	98.2	88.8	74.1	58.8	37.9	9.9	72.5	1239
SEP		100.0	100.0	99.8	96.0	87.6	75.2	60.8	41.6	14.6	73.4	1200
OCT		100.0	100.0	98.6	93.1	82.0	66.7	50.2	33.4	14.0	69.6	1240
NOV		100.0	100.0	99.3	93.4	79.3	57.6	40.0	25.0	12.6	66.6	1200
DEC		100.0	100.0	99.5	95.7	84.4	66.7	44.1	25.8	12.5	68.5	1240
TOTALS		100.0	99.8	97.9	91.6	79.2	62.6	45.7	29.1	11.9	67.5	14605

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PERCENTAGE FREQUENCY OF AIR TEMPERATURE  
VS.

WIND DIRECTION

14793

WILLOW GROVE, PENNSYLVANIA

JAN 1973-DEC 1977

JANUARY

ALL

STATION

STATION NAME

YEARS

MONTH

HOURS (L.S.T.)

WIND DIRECTION

TEMP.	NNW & N	NNE & NE	ESE & E	SSE & S	SSW & SW	WSW & W	WNW & NW	CALM	TOTAL FREQ.	% OF TOTAL
122 +										
117 TO 121										
112 TO 116										
107 TO 111										
102 TO 106										
97 TO 101										
92 TO 96										
87 TO 91										
82 TO 86										
77 TO 81										
72 TO 76										
67 TO 71										
62 TO 66										
57 TO 61										
52 TO 56	3.3		3.3	5.3	30.0	10.0	10.0		1	.1
47 TO 51	7.3			31.6	21.1	36.8	5.3		10	.8
42 TO 46	13.3	2.7		13.3	20.0	30.0	13.3	3.3	30	2.4
37 TO 41	8.9	3.4		10.9	10.9	30.9	20.0	5.5	55	4.4
32 TO 36	11.3	3.3	6.2	7.1	12.4	19.5	23.0	7.1	113	9.1
27 TO 31	14.2	2.2	8.4	5.6	7.3	19.0	31.8	10.6	179	14.4
22 TO 26	11.6	5.2	14.1	6.6	8.5	16.0	19.7	16.4	213	17.2
17 TO 21	19.2	3.1	7.7	3.8	6.0	22.4	19.7	20.2	183	14.8
12 TO 16	13.9	3.8	7.5	5.2	5.4	17.9	28.9	13.9	173	14.0
7 TO 11	7.1		3.1	1.3	3.8	31.5	22.3	15.4	130	10.5
2 TO 6	5.9		3.8		1.3	35.4	22.8	19.0	79	6.4
-3 TO 1	12.5					46.4	39.3	7.1	28	2.3
-8 TO -4						58.8	23.5	11.8	17	1.4
-13 TO -9						62.5	25.0		8	.6
-18 TO -14						50.0	50.0		2	.2
-23 TO -19										
-28 TO -24										
-33 TO -29										
-38 TO -34										
-43 TO -39										
-48 TO -44										
-53 TO -49										
-58 TO -54										
-59 & LOWER										
TOTALS	11.8	2.9	7.0	4.4	5.7	7.4	23.8	13.4	1240	100.0

# PERCENTAGE FREQUENCY OF AIR TEMPERATURE VS.

14793  
STATION

WILLOW GROVE, PENNSYLVANIA

WIND DIRECTION

JAN 1973-DEC 1977

FEBRUARY

ALL

HOURS (L.S.T.)

STATION NAME

YEARS

MONTH

## WIND DIRECTION

TEMP.	NINW & N	NNE & NE	ENE & E	ESE & SE	SSE & S	SSW & SW	WSW & W	WNW & NW	CALM	TOTAL FREQ.	% OF TOTAL
122+											
117 TO 121											
112 TO 116											
107 TO 111											
102 TO 106											
97 TO 101											
92 TO 96											
87 TO 91											
82 TO 86											
77 TO 81											
72 TO 76											
67 TO 71	18.2				25.0	50.0	9.1	25.0	9.1	4	.4
62 TO 66						27.3	9.1	36.4	9.1	11	1.0
57 TO 61				4.3	17.4	47.8	21.7	8.7		23	2.0
52 TO 56	2.2			4.3	23.9	23.9	30.4	10.9	4.3	46	4.1
47 TO 51	1.5	1.5	13.6	1.5	12.1	25.8	28.8	10.6	4.5	66	5.9
42 TO 46	5.8	.8	10.0	4.2	8.3	12.5	32.5	17.5	8.3	120	10.6
37 TO 41	8.9	4.5	8.9	8.3	10.8	12.1	24.8	14.0	7.6	157	13.9
32 TO 36	9.2	6.6	13.5	3.1	4.8	6.3	17.9	23.6	13.1	229	20.3
27 TO 31	18.2	7.1	10.0	2.9	5.9	10.6	8.8	21.8	14.7	170	15.1
22 TO 26	24.3	13.9	6.9	2.1	2.1	6.3	9.0	27.1	8.3	144	12.8
17 TO 21	20.0	4.4	4.4			4.4	21.1	25.6	20.0	90	8.0
12 TO 16	25.0	2.3	2.3				18.2	38.6	13.6	44	3.9
7 TO 11	38.1						4.8	52.4	4.8	21	1.9
2 TO 6	66.7							33.3		3	.3
-3 TO 1											
-8 TO -4											
-13 TO -9											
-18 TO -14											
-23 TO -19											
-28 TO -24											
-33 TO -29											
-38 TO -34											
-43 TO -39											
-48 TO -44											
-53 TO -49											
-58 TO -54											
-59 & LWR											
TOTALS	13.4	5.4	6.7	3.3	6.6	11.3	19.0	21.6	10.6	1128	100.0

# PERCENTAGE FREQUENCY OF AIR TEMPERATURE VS.

14793

WILLOW GROVE, PENNSYLVANIA

WIND DIRECTION

JAN 1973-DEC 1977

MARCH

ALL

STATION NAME

YEARS

MONTH

HOURS (L.S.T.)

## WIND DIRECTION

TEMP.	NNW & N	NNE & NE	ENE & E	ESE & SE	SSE & S	SSW & SW	WSW & W	WNW & NW	CALM	TOTAL FREQ.	% OF TOTAL
122 -											
117 TO 121											
112 TO 116											
107 TO 111											
102 TO 106											
97 TO 101											
92 TO 96											
87 TO 91											
82 TO 86											
77 TO 81					50.0	50.0				2	.2
72 TO 76					11.1	66.7	22.2			9	.7
67 TO 71					6.3	56.3	31.3	6.3		16	1.3
62 TO 66				2.9	26.5	32.4	23.5	8.8	3.9	34	2.7
57 TO 61	3.1		1.6	7.8	14.1	29.7	25.0	14.1	4.7	64	5.2
52 TO 56	7.7	3.8	4.8	12.5	12.5	19.2	14.4	23.1	1.9	104	8.4
47 TO 51	9.7	3.4	8.0	14.9	9.7	8.6	13.7	23.4	8.6	173	14.1
42 TO 46	12.0	5.4	9.5	16.1	6.2	7.0	12.8	19.8	11.2	242	19.5
37 TO 41	10.6	6.1	14.3	14.4	3.4	5.7	10.2	22.0	8.3	264	21.3
32 TO 36	16.8	7.7	21.4	2.6	4.6	3.6	10.7	24.0	8.7	196	15.8
27 TO 31	21.3	6.7	13.5	5.5	1.1	1.1	5.6	30.3	14.6	89	7.2
22 TO 26	30.0	5.0				2.5	12.5	35.0	15.0	40	3.2
17 TO 21								80.0	20.0	5	.4
12 TO 16											
7 TO 11											
2 TO 6											
-3 TO 1											
-8 TO -4											
-13 TO -9											
-18 TO -14											
-23 TO -19											
-28 TO -24											
-33 TO -29											
-38 TO -34											
-43 TO -39											
-48 TO -44											
-53 TO -49											
-58 TO -54											
-59 & LVR											
TOTALS	11.9	5.0	11.9	10.6	6.9	9.8	12.8	22.3	8.7	1240	100.0

# PERCENTAGE FREQUENCY OF AIR TEMPERATURE VS.

WIND DIRECTION

WILLOW GROVE, PENNSYLVANIA

JAN 1973-DEC 1977

APRIL ALL

14793

STATION NAME

YEARS

MONTH

WIND DIRECTION

TEMP.	NNW & N	NNE & NE	ESE & SE	SSE & S	SSW & SW	WSW & W	WNW & NW	CALM	TOTAL FREQ.	% OF TOTAL
122 +										
117 TO 121										
112 TO 116										
107 TO 111										
102 TO 106										
97 TO 101										
92 TO 96				16.7	33.3	100.0	50.0		1	.1
87 TO 91					26.7	26.7	33.3	6.7	6	.5
82 TO 86	6.7				30.0	35.0	15.0	5.0	13	1.3
77 TO 81		10.0	5.0						20	1.7
72 TO 76	3.3	1.9	3.8	11.5	32.7	34.6	7.7	3.8	52	4.3
67 TO 71	6.2	1.5	3.1	6.2	35.4	21.5	18.5	7.7	63	5.4
62 TO 66	12.0	1.0	2.0	9.0	26.0	32.0	10.0	7.0	100	8.3
57 TO 61	13.3	4.0	5.5	7.3	19.4	23.4	12.9	5.6	124	10.3
52 TO 56	13.7	7.0	10.3	9.2	5.9	17.8	21.1	4.9	183	15.4
47 TO 51	18.9	5.0	14.6	5.5	6.7	16.4	21.5	11.4	219	18.3
42 TO 46	25.0	9.2	10.7	2.0	4.6	11.2	27.6	10.7	196	16.3
37 TO 41	31.1	7.5	6.7	2.5	2.5	19.0	34.2	5.0	120	10.0
32 TO 36	36.8	5.4		1.4	5.4	12.2	39.2	5.4	74	6.2
27 TO 31	100.0					10.5	42.1	10.5	19	1.6
22 TO 26									4	.3
17 TO 21										
12 TO 16										
7 TO 11										
2 TO 6										
-3 TO 1										
-8 TO -4										
-13 TO -9										
-18 TO -14										
-23 TO -19										
-28 TO -24										
-33 TO -29										
-38 TO -34										
-43 TO -39										
-48 TO -44										
-53 TO -49										
-58 TO -54										
-59 & LOWER										
TOTALS	16.2	4.9	7.8	5.1	12.3	18.8	22.6	7.5	1200	100.0

# PERCENTAGE FREQUENCY OF AIR TEMPERATURE VS.

WIND DIRECTION

WILLOW GROVE, PENNSYLVANIA

JAN 1973-DEC 1977

MAY

ALL

HOURS (L.S.T.)

STATION NAME

YEARS

MONTH

WIND DIRECTION

TEMP.	NNW & N	NNE & NE	ENE & E	ESE & SE	SSE & S	SSW & SW	WSW & W	WNW & NW	CALM	TOTAL FREQ.	% OF TOTAL
122+											
117 TO 121											
112 TO 116											
107 TO 111											
102 TO 106											
97 TO 101											
92 TO 96											
87 TO 91											
82 TO 86											
77 TO 81	4.3	1.4		1.4	11.6	23.5	41.2	17.6	17.6	4	.3
72 TO 76	6.7	1.7	2.5	.3	14.3	21.7	31.9	13.0	14.3	17	1.4
67 TO 71	6.0	2.7	5.5	6.6	11.5	30.3	24.4	9.2	10.1	69	5.6
62 TO 66	9.7	5.8	5.6	6.3	12.1	16.5	18.4	13.6	11.7	119	9.6
57 TO 61	12.2	4.2	7.0	5.5	15.5	14.6	14.1	13.1	10.8	182	14.7
52 TO 56	11.3	10.8	16.2	12.3	9.3	3.9	8.8	16.7	10.8	206	16.6
47 TO 51	13.1	4.1	9.7	9.7	6.3	6.2	11.0	20.7	17.2	213	17.2
42 TO 46	22.4	4.5	11.6	4.5	1.5	6.0	3.0	28.4	17.9	204	16.5
37 TO 41	7.1					14.3	28.6	35.7	14.3	145	11.7
32 TO 36										67	5.4
27 TO 31										14	1.1
22 TO 26											
17 TO 21											
12 TO 16											
7 TO 11											
2 TO 6											
-3 TO 1											
-8 TO -4											
-13 TO -9											
-18 TO -14											
-23 TO -19											
-28 TO -24											
-33 TO -29											
-38 TO -34											
-43 TO -39											
-48 TO -44											
-53 TO -49											
-58 TO -54											
-59 & LVP											
TOTALS	10.2	4.8	7.7	7.0	11.0	14.3	17.2	19.4	12.5	1240	100.0

NAVWEASERVCOM

PERCENTAGE FREQUENCY OF AIR TEMPERATURE  
VS.

STATION NAME  
**WILLOW GROVE, PENNSYLVANIA**

STATION  
**14793**

WIND DIRECTION  
**JAN 1973-DEC 1977**

MONTH  
**JUNE**

HOURS (L.S.T.)  
**ALL**

WIND DIRECTION												
TEMP.	NW & N	NNE & NE	ENE & E	ESE & SE	SSE & S	SSW & SW	WSW & W	WNW & NW	CALM	TOTAL FREQ.	% OF TOTAL	
122 +												
117 TO 121												
112 TO 116												
107 TO 111												
102 TO 106												
97 TO 101												
92 TO 96						100.0				1	.1	
87 TO 91	3.8				7.7	11.5	38.5	38.5		26	2.2	
82 TO 86	8.1	1.2			10.5	22.1	32.6	20.9	3.5	86	7.2	
77 TO 81	5.6	5.6	1.7	6.2	14.7	24.3	22.6	13.0	6.2	177	14.8	
72 TO 76	7.4	2.3	5.1	4.7	17.6	19.1	22.3	13.3	8.2	256	21.3	
67 TO 71	6.5	2.4	10.2	10.2	14.6	13.0	17.9	11.0	14.2	246	20.5	
62 TO 66	9.1	6.7	12.0	11.5	14.4	9.6	12.0	10.0	14.8	209	17.4	
57 TO 61	11.8	13.9	15.0	6.3	11.1	4.2	11.1	11.8	13.9	144	12.0	
52 TO 56	29.8	8.5	14.9		5.4		17.0	6.4	17.0	47	3.9	
47 TO 51			12.5				12.5	37.5	37.5	8	.7	
42 TO 46												
37 TO 41												
32 TO 36												
27 TO 31												
22 TO 26												
17 TO 21												
12 TO 16												
7 TO 11												
2 TO 6												
-3 TO 1												
-8 TO -4												
-13 TO -9												
-18 TO -14												
-23 TO -19												
-28 TO -24												
-33 TO -29												
-38 TO -34												
-43 TO -39												
-48 TO -44												
-53 TO -49												
-58 TO -54												
-59 & LWR												
TOTALS	8.6	9.1	8.2	6.8	13.9	14.4	19.1	13.0	11.0	1200	100.0	

# PERCENTAGE FREQUENCY OF AIR TEMPERATURE

VS.

WIND DIRECTION

WILLOW GROVE, PENNSYLVANIA

JAN 1973-DEC 1977

JULY

ALL

14793

STATION

STATION NAME

YEARS

MONTH

HOURS (L.S.T.)

WIND DIRECTION

TEMP.	NNW & N	NNE & NE	ENE & E	ESE & SE	SSE & S	SSW & SW	WSW & W	WNW & NW	CALM	TOTAL FREQ.	% OF TOTAL
122 +											
117 TO 121											
112 TO 116											
107 TO 111											
102 TO 106											
97 TO 101							100.0			1	.1
92 TO 96	18.2					27.3	27.3	27.3		11	.9
87 TO 91	11.8				2.0	11.8	47.1	25.5	2.0	51	4.1
82 TO 86	7.8	.6	1.8	2.4	4.2	18.6	33.5	25.1	6.0	167	13.5
77 TO 81	14.0	5.4	3.5	5.0	8.5	12.0	23.6	20.2	7.8	238	20.8
72 TO 76	13.3	2.9	3.5	6.0	13.3	17.1	21.9	9.2	12.7	315	25.4
67 TO 71	14.6	4.6	5.4	6.5	8.1	12.7	13.1	10.8	24.2	260	21.0
62 TO 66	20.0	7.4	6.7	1.5	3.7	3.0	17.0	14.8	25.9	135	10.9
57 TO 61	36.1			2.8	2.8	5.6	11.1	11.1	30.6	36	2.9
52 TO 56	50.0			16.7			16.7		16.7	6	.5
47 TO 51											
42 TO 46											
37 TO 41											
32 TO 36											
27 TO 31											
22 TO 26											
17 TO 21											
12 TO 16											
7 TO 11											
2 TO 6											
-3 TO 1											
-8 TO -4											
-13 TO -9											
-18 TO -14											
-23 TO -19											
-28 TO -24											
-33 TO -29											
-38 TO -34											
-43 TO -39											
-48 TO -44											
-53 TO -49											
-58 TO -54											
-59 & LWR											
TOTALS	14.5	3.7	3.7	4.5	8.1	13.2	22.3	15.4	14.6	1240	100.0

# PERCENTAGE FREQUENCY OF AIR TEMPERATURE

VS.

WIND DIRECTION

WILLOW GROVE, PENNSYLVANIA

JAN 1973-DEC 1977

AUGUST

ALL

STATION NAME

YEARS

MONTH

HOURS (L.S.T.)

## WIND DIRECTION

TEMP.	NW & N	NE & NE	ENE & E	ESE & SE	SSE & S	SSW & SW	WSW & W	WNW & NW	CALM	TOTAL FREQ.	% OF TOTAL
122 +											
117 TO 121											
112 TO 116											
107 TO 111											
102 TO 106											
97 TO 101											
92 TO 96	22.2	2.4			4.8	16.7	44.4	33.3		9	.7
87 TO 91	11.9		2.7	1.4	3.4	19.0	50.0	11.9	2.4	42	3.4
82 TO 86	15.0						26.5	24.3	7.5	147	11.9
77 TO 81	10.8	4.6	5.1	2.1	7.7	14.9	24.6	21.5	8.7	195	15.7
72 TO 76	8.2	4.7	7.9	6.3	9.0	16.2	20.0	11.0	16.7	365	29.4
67 TO 71	6.6	6.2	13.2	5.9	9.2	10.6	11.0	14.7	22.7	273	22.0
62 TO 66	19.7	10.6	11.4	1.5	4.5	4.5	10.6	19.6	23.5	132	10.6
57 TO 61	22.8	10.5	10.5			3.5	10.5	19.3	22.8	97	7.8
52 TO 56	43.8	12.5					18.8	6.3	18.8	16	1.3
47 TO 51								100.0	100.0	3	.2
42 TO 46										1	.1
37 TO 41											
32 TO 36											
27 TO 31											
22 TO 26											
17 TO 21											
12 TO 16											
7 TO 11											
2 TO 6											
-3 TO 1											
-8 TO -4											
-13 TO -9											
-18 TO -14											
-23 TO -19											
-28 TO -24											
-33 TO -29											
-38 TO -34											
-43 TO -39											
-48 TO -44											
-53 TO -49											
-58 TO -54											
-59 & LVP											
TOTALS	11.6	5.3	6.1	3.3	6.9	12.9	19.2	15.9	16.5	1240	100.0

# PERCENTAGE FREQUENCY OF AIR TEMPERATURE VS.

WIND DIRECTION

WILLOW GROVE, PENNSYLVANIA

JAN 1973-DEC 1977

SEPTEMBER

ALL

HOURS (L.S.T.)

STATION NAME

YEARS

MONTH

WIND DIRECTION

TEMP.	NNW & N	NNE & NE	ENE & E	ESE & SE	SSE & S	SSW & SW	WSW & W	WNW & NW	CALM	TOTAL FREQ.	% OF TOTAL
122 +											
117 TO 121											
112 TO 116											
107 TO 111											
102 TO 106											
97 TO 101											
92 TO 96	50.0	15.4	7.7	7.7	7.7	7.7	50.0	15.4		2	.2
87 TO 91		3.2	3.2	9.7	3.2	9.7	46.2	15.4		13	1.1
82 TO 86	16.1	1.3	1.3	1.3	9.2	21.1	16.1	32.3	6.5	31	2.6
77 TO 81	7.9	1.1	2.7	5.5	9.3	18.6	27.6	26.3	3.9	76	6.3
72 TO 76	7.1	3.7	3.3	9.9	11.5	14.8	23.0	19.1	13.7	183	15.3
67 TO 71	8.2	5.4	13.3	8.7	8.7	8.3	17.7	11.5	17.3	243	20.3
62 TO 66	13.7	11.0	18.1	10.5	4.3	4.8	9.5	11.0	18.1	241	20.1
57 TO 61	12.9	9.4	14.5	3.6	3.6		5.8	13.8	31.9	210	17.5
52 TO 56	17.4	12.2	6.1	2.0		2.0	18.4	20.4	38.8	138	11.5
47 TO 51	12.2	6.1	2.0					10.0	40.0	49	4.1
42 TO 46	50.0							25.0	50.0	10	.8
37 TO 41	25.0									4	.3
32 TO 36											
27 TO 31											
22 TO 26											
17 TO 21											
12 TO 16											
7 TO 11											
2 TO 6											
-3 TO 1											
-8 TO -4											
-13 TO -9											
-18 TO -14											
-23 TO -19											
-28 TO -24											
-33 TO -29											
-38 TO -34											
-43 TO -39											
-48 TO -44											
-53 TO -49											
-58 TO -54											
-59 & LVR											
TOTALS	11.8	5.6	9.3	7.2	7.4	10.1	15.8	14.3	18.5	1200	100.0

# PERCENTAGE FREQUENCY OF AIR TEMPERATURE VS.

WIND DIRECTION

WILLOW GROVE, PENNSYLVANIA

JAN 1973-DEC 1977

OCTOBER

ALL  
HOURS (L.S.T.)

STATION NAME

YEARS

MONTH

WIND DIRECTION

TEMP.	NINW & N	NNE & NE	ENE & E	ESE & SE	SSE & S	SSW & SW	WSW & W	WNW & NW	CALM	TOTAL FREQ.	% OF TOTAL
122+											
117 TO 121											
112 TO 116											
107 TO 111											
102 TO 106											
97 TO 101											
92 TO 96											
87 TO 91											
82 TO 86											
77 TO 81	14.3	5.7	5.7	5.7	14.3		50.0	50.0		2	.2
72 TO 76	2.9	5.7	7.4	4.3	11.4	20.0	57.1	14.3		7	.6
67 TO 71	4.3	1.1	7.4	4.3	19.1	14.9	25.7	17.1	5.7	35	2.8
62 TO 66	11.5	5.0	10.1	5.8	7.2	13.7	22.3	18.1	8.5	94	7.6
57 TO 61	8.4	10.0	14.6	9.6	5.0	13.4	18.0	16.5	12.2	139	11.2
52 TO 56	13.5	15.1	16.7	4.5	5.3	4.9	12.1	14.6	12.1	239	19.3
47 TO 51	16.2	8.1	9.6	1.0	7.1	5.6	9.4	18.0	12.7	245	19.8
42 TO 46	18.7	7.0	7.6		4.7	4.1	13.6	17.7	21.2	198	16.0
37 TO 41	31.7	4.8	6.3			4.8	17.0	22.2	18.7	171	13.8
32 TO 36	28.1	6.3				3.1	17.5	23.8	11.1	63	5.1
27 TO 31	38.5						21.9	21.9	18.8	32	2.6
22 TO 26	50.0						7.7	15.4	38.5	13	1.0
17 TO 21									50.0	2	.2
12 TO 16											
7 TO 11											
2 TO 6											
-3 TO 1											
-8 TO -4											
-13 TO -9											
-18 TO -14											
-23 TO -19											
-28 TO -24											
-33 TO -29											
-38 TO -34											
-43 TO -39											
-48 TO -44											
-53 TO -49											
-58 TO -54											
-59 & LWR											
TOTALS	14.0	5.4	10.9	4.0	6.5	8.5	15.1	18.1	14.5	1240	100.0

# PERCENTAGE FREQUENCY OF AIR TEMPERATURE VS.

WIND DIRECTION

WILLOW GROVE, PENNSYLVANIA

JAN 1973-DEC 1977

NOVEMBER

ALL

HOURS (L.S.T.)

YEARS

STATION NAME

WIND DIRECTION

TEMP.	NNW & N	NNE & NE	ESE & E	ESE & SE	SSE & S	SSW & SW	WSW & W	WNW & NW	CALM	TOTAL FREQ.	% OF TOTAL
122 +											
117 TO 121											
112 TO 116											
107 TO 111											
102 TO 106											
97 TO 101											
92 TO 96											
87 TO 91											
82 TO 86											
77 TO 81											
72 TO 76				6.7		20.0	40.0	20.0	13.3	1	.1
67 TO 71			2.5	10.0	5.0	37.5	32.5	12.5		13	1.3
62 TO 66	4.1	2.0	6.1	14.3	20.4	28.6	12.2	4.1	8.2	40	3.3
57 TO 61	5.5	3.6	14.5	8.2	10.0	17.3	20.0	12.7	8.2	49	4.1
52 TO 56	9.0	4.8	18.6	3.6	13.8	15.6	15.0	12.6	7.2	110	9.2
47 TO 51	12.0	1.9	3.8	3.8	5.1	10.8	32.9	14.6	15.2	167	13.9
42 TO 46	10.6	5.9	2.7	3.7	7.4	6.4	21.3	30.9	11.2	158	13.2
37 TO 41	12.1	6.3	7.8	2.9	3.9	8.3	22.8	25.2	10.7	188	15.7
32 TO 36	13.7	5.9	3.9	.7	1.3	9.8	22.9	20.3	21.6	206	17.2
27 TO 31	11.6	1.2	1.2		2.3	9.3	20.9	32.6	20.9	153	12.8
22 TO 26	5.3						36.8	47.4	10.5	86	7.2
17 TO 21	16.7						50.0	100.0	33.3	19	1.6
12 TO 16										6	.5
7 TO 11										2	.2
2 TO 6											
-3 TO 1											
-8 TO -4											
-13 TO -9											
-18 TO -14											
-23 TO -19											
-28 TO -24											
-33 TO -29											
-38 TO -34											
-43 TO -39											
-48 TO -44											
-53 TO -49											
-58 TO -54											
-59 & LVR											
TOTALS	10.0	4.2	7.1	3.9	6.7	12.2	22.9	20.7	12.4	1200	100.0

# PERCENTAGE FREQUENCY OF AIR TEMPERATURE VS.

WIND DIRECTION

WILLOW GROVE, PENNSYLVANIA

JAN 1973-DEC 1977

DECEMBER

ALL

STATION NAME

YEARS

MONTH

HOURS (L.S.T.)

TEMP.	NINW & N	NNE & NE	ENE & E	ESE & SE	SSE & S	SSW & SW	WSW & W	WINW & NW	CALM	TOTAL FREQ.	% OF TOTAL
122 +											
117 TO 121											
112 TO 116											
107 TO 111											
102 TO 106											
97 TO 101											
92 TO 96											
87 TO 91											
82 TO 86											
77 TO 81											
72 TO 76											
67 TO 71											
62 TO 66	10.5			5.3	28.6	57.1	14.3	10.5		7	.6
57 TO 61	4.9			4.9	36.8	36.8		2.4	14.6	19	1.5
52 TO 56	12.3	3.1	4.6	3.1	43.9	19.5	9.8	23.1		41	3.3
47 TO 51	9.0	5.4	11.4	6.6	12.3	21.5	20.0	19.9	12.7	65	5.2
42 TO 46	9.2	5.4	17.3	3.1	7.8	9.0	18.1	21.5	19.2	166	13.4
37 TO 41	12.4	12.0	9.1	4.1	4.2	6.2	13.8	24.1	14.1	260	21.0
32 TO 36	20.3	7.5	5.3	2.7	2.9	7.5	13.7	17.1	16.0	241	19.4
27 TO 31	18.3	7.3	6.4	.9	9.2	9.1	17.6	24.8	18.5	187	15.1
22 TO 26	13.5	1.0	4.2	2.1		6.3	22.9	34.4	15.6	109	8.8
17 TO 21	8.6					2.9	28.6	40.0	20.0	96	7.7
12 TO 16	15.4						61.5	15.4	7.7	35	2.8
7 TO 11							100.0			13	1.0
2 TO 6										1	.1
-3 TO 1											
-8 TO -4											
-13 TO -9											
-18 TO -14											
-23 TO -19											
-28 TO -24											
-33 TO -29											
-38 TO -34											
-43 TO -39											
-48 TO -44											
-53 TO -49											
-58 TO -54											
-59 & LWR											
TOTALS	12.7	6.2	6.9	3.4	6.8	9.1	16.3	22.0	14.7	1240	100.0

# PERCENTAGE FREQUENCY OF AIR TEMPERATURE VS.

WIND DIRECTION

WILLOW GROVE, PENNSYLVANIA

JAN 1973-DEC 1977

ALL

HOURS (L.S.T.)

YEARS

STATION NAME

MONTH

## WIND DIRECTION

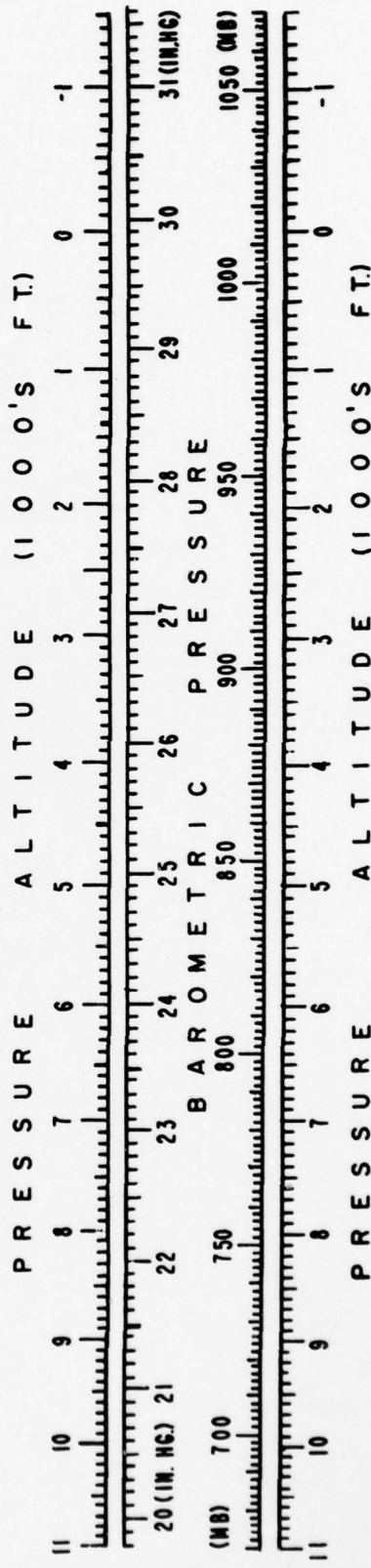
TEMP.	NNW & N	NNE & NE	ENE & E	ESE & SE	SSE & S	SSW & SW	WSW & W	WNW & NW	CALM	TOTAL FREQ.	% OF TOTAL
122+											
117 TO 121											
112 TO 116											
107 TO 111											
102 TO 106											
97 TO 101											
92 TO 96	20.8	2.1	.7		4.9	16.7	37.5	25.0		1	.0
87 TO 91	8.5					13.4	45.8	23.2	1.4	24	.2
82 TO 86	10.3	.6	1.9	1.9	4.7	19.1	30.1	24.7	6.3	142	1.0
77 TO 81	9.6	4.3	3.1	3.9	9.9	17.5	25.3	18.6	7.7	465	3.2
72 TO 76	8.5	2.8	4.7	5.2	12.2	19.6	22.6	12.0	12.2	805	5.5
67 TO 71	7.8	3.5	7.5	7.3	11.0	15.9	17.4	12.9	16.6	1349	9.2
62 TO 66	12.3	5.7	8.7	6.3	10.4	12.9	16.4	12.0	15.3	1424	9.7
57 TO 61	11.5	7.2	11.3	7.7	9.3	13.3	14.6	12.9	12.2	1273	8.7
52 TO 56	12.7	8.4	12.8	7.1	10.3	8.3	13.1	15.9	11.5	1258	8.6
47 TO 51	11.9	4.2	8.7	6.0	7.2	9.6	18.8	19.5	14.2	1229	8.4
42 TO 46	13.7	5.3	8.5	6.8	5.7	7.3	16.9	23.5	12.2	1141	7.8
37 TO 41	12.5	5.4	12.1	6.0	4.6	6.9	17.0	24.2	11.2	1274	8.7
32 TO 36	14.1	7.1	11.5	2.8	3.9	7.2	15.8	23.6	14.0	1138	7.8
27 TO 31	18.2	5.0	7.2	2.9	3.7	7.4	15.4	22.8	17.4	747	5.1
22 TO 26	18.9	7.9	6.1	2.0	4.5	5.7	13.6	26.3	12.8	491	3.4
17 TO 21	17.4	2.8	3.7	1.2		4.6	26.0	27.2	17.1	327	2.2
12 TO 16	15.6	2.5	2.5			1.3	28.8	31.9	17.5	160	1.1
7 TO 11	19.4						35.5	38.7	6.5	62	.4
2 TO 6	14.3						52.4	23.8	9.5	21	.1
-3 TO 1	12.5						62.5	25.0		8	.1
-8 TO -4							50.0	50.0		2	.0
-13 TO -9											
-18 TO -14											
-23 TO -19											
-28 TO -24											
-33 TO -29											
-38 TO -34											
-43 TO -39											
-48 TO -44											
-53 TO -49											
-58 TO -54											
-59 & LWR											
TOTALS	12.2	5.1	6.3	5.3	7.6	11.3	18.5	18.7	12.9	14008	100.0

## PART F PRESSURE SUMMARY

Presented in this part are two tables giving the means, standard deviations, and total number of observations of station pressure and sea-level pressure by month and annual for the local hourly observations corresponding to the eight 3-hourly synoptic times GCT. The same computations are also provided at the bottom of the page for all hours combined. All years of data available are combined in both of these tables, although the overall period is limited to January 1946 through December 1963 because of changes in reporting practices before and after those dates.

1. Station pressure in inches of mercury.
2. Sea-level pressure in millibars.

Provided below is a scale to convert station pressure values in inches of mercury or millibars to pressure altitude in 1000's of feet. This scale is an enlarged model of the pressure altitude scale in the Smithsonian Meteorological Tables.



## MEANS AND STANDARD DEVIATIONS

STATION PRESSURE IN INCHES HG FROM HOURLY OBSERVATIONS

73-77

WILLOW GROVE, PENNSYLVANIA

14793

HRS.(LST.)		YEARS												ANNUAL
		JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	
01	MEAN	29.66129	63029	61829	59829	58629	61129	62029	67829	68129	70429	66529	655	29.642
	S. D.	.257	.276	.261	.232	.163	.172	.143	.118	.160	.218	.236	.285	.219
	TOTAL OBS	155	141	155	150	155	150	155	155	150	155	150	155	1826
04	MEAN	29.66229	62129	61129	59129	58129	60329	61529	67629	67229	70129	66229	656	29.638
	S. D.	.255	.279	.262	.243	.167	.174	.145	.119	.162	.216	.239	.289	.222
	TOTAL OBS	155	141	155	150	155	150	155	155	150	155	150	155	1826
07	MEAN	29.67629	64029	63629	62229	60929	63129	63929	70029	69829	72229	68129	668	29.660
	S. D.	.256	.267	.266	.255	.170	.174	.147	.120	.167	.215	.240	.288	.222
	TOTAL OBS	155	141	155	150	155	150	155	155	150	155	150	155	1826
10	MEAN	29.70329	66029	64429	62129	60929	63429	64529	70729	70529	73429	69829	690	29.671
	S. D.	.264	.265	.275	.260	.173	.175	.146	.121	.171	.222	.238	.294	.226
	TOTAL OBS	155	141	155	150	155	150	155	155	150	155	150	155	1826
13	MEAN	29.65129	62429	60229	58729	58029	61329	62329	68429	67229	69729	65429	640	29.636
	S. D.	.268	.262	.286	.248	.171	.173	.145	.120	.173	.221	.235	.296	.226
	TOTAL OBS	155	141	155	150	155	150	155	155	150	155	150	155	1826
16	MEAN	29.64129	60029	56629	55529	55029	58529	59629	65529	64429	67629	63929	633	29.612
	S. D.	.271	.261	.279	.235	.165	.171	.141	.116	.169	.215	.234	.288	.222
	TOTAL OBS	155	141	155	150	155	150	155	155	150	155	150	155	1826
19	MEAN	29.66229	62029	58829	57229	56029	59029	59929	66029	65729	69529	66429	657	29.627
	S. D.	.270	.257	.271	.223	.156	.167	.139	.112	.163	.212	.228	.283	.217
	TOTAL OBS	155	141	155	150	155	150	155	155	150	155	150	155	1826
22	MEAN	29.67729	63329	61229	60329	58729	61829	62129	68529	67929	70929	67329	664	29.647
	S. D.	.262	.263	.264	.227	.157	.167	.139	.114	.164	.222	.229	.285	.217
	TOTAL OBS	155	141	155	150	155	150	155	155	150	155	150	155	1826
ALL HOURS	MEAN	29.66729	62829	61029	59429	58329	61129	62029	68029	67629	70529	66729	658	29.642
	S. D.	.263	.266	.271	.241	.166	.172	.144	.118	.167	.218	.235	.288	.222
	TOTAL OBS	1240	1128	1240	1200	1240	1200	1240	1240	1200	1240	1200	1240	14608

# MEANS AND STANDARD DEVIATIONS

5707 MEANS AND STANDARD DEVIATIONS JAN 68

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SEA LEVEL PRESSURE IN MBS FROM HOURLY OBSERVATIONS

73-77

WILLOW GROVE, PENNSYLVANIA

14793

HRS.(LST.)	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	ANNUAL
01	MEAN	1018.7	1017.6	1017.0	1016.3	1015.7	1016.5	1016.7	1018.9	1019.8	1018.6	1018.4	1017.7
	S. D.	8.848	9.517	8.999	7.918	5.598	5.886	4.935	5.516	7.495	8.138	9.830	7.533
	TOTAL OBS	155	141	155	150	155	150	155	150	155	150	155	1826
04	MEAN	1018.7	1017.3	1016.8	1016.0	1015.6	1016.2	1016.5	1018.6	1019.7	1018.5	1018.5	1017.6
	S. D.	8.782	9.653	9.012	8.264	5.745	5.944	5.117	5.652	7.467	8.220	9.977	7.638
	TOTAL OBS	155	141	155	150	155	150	155	150	155	150	155	1826
07	MEAN	1019.3	1018.0	1017.7	1017.0	1016.5	1017.1	1017.3	1019.4	1020.4	1019.2	1018.9	1018.4
	S. D.	8.852	9.273	9.169	8.778	5.863	5.964	5.046	5.757	7.361	8.266	9.949	7.658
	TOTAL OBS	155	141	155	150	155	150	155	150	155	150	155	1826
10	MEAN	1020.1	1018.6	1017.9	1016.9	1016.4	1017.2	1017.5	1019.6	1020.8	1019.7	1019.5	1018.7
	S. D.	9.090	9.149	9.466	8.906	5.932	5.997	4.998	5.872	7.659	8.205	10.219	7.800
	TOTAL OBS	155	141	155	150	155	150	155	150	155	150	155	1826
13	MEAN	1018.3	1017.3	1016.4	1015.7	1015.4	1016.3	1016.7	1018.8	1019.4	1018.1	1017.8	1017.4
	S. D.	9.232	9.044	9.834	8.532	5.827	5.904	4.947	5.936	7.579	8.096	10.194	7.757
	TOTAL OBS	155	141	155	150	155	150	155	150	155	150	155	1826
16	MEAN	1017.8	1016.4	1015.1	1014.6	1014.3	1015.5	1015.8	1017.8	1018.8	1017.6	1017.6	1016.6
	S. D.	9.405	9.017	9.583	8.003	5.631	5.829	4.796	5.793	7.374	8.053	9.911	7.635
	TOTAL OBS	155	141	155	150	155	150	155	150	155	150	155	1826
19	MEAN	1018.6	1017.2	1015.9	1015.2	1014.7	1015.6	1015.9	1018.0	1019.4	1018.5	1018.4	1017.1
	S. D.	9.389	8.892	9.303	7.620	5.356	5.713	4.762	5.594	7.287	7.867	9.729	7.495
	TOTAL OBS	155	141	155	150	155	150	155	150	155	150	155	1826
22	MEAN	1019.2	1017.6	1016.8	1016.3	1015.7	1016.7	1018.9	1020.0	1020.0	1018.8	1018.7	1017.9
	S. D.	9.019	9.096	9.082	7.761	5.396	5.734	4.770	5.573	7.618	7.855	9.800	7.468
	TOTAL OBS	155	141	155	150	155	150	155	150	155	150	155	1826
ALL HOURS	MEAN	1018.8	1017.5	1016.7	1016.0	1015.5	1016.4	1016.6	1018.7	1019.8	1018.6	1018.5	1017.7
	S. D.	9.077	9.199	9.322	8.246	5.700	5.884	4.942	5.736	7.482	8.087	9.940	7.647
	TOTAL OBS	1240	1128	1240	1200	1240	1200	1240	1200	1240	1200	1240	14608

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